

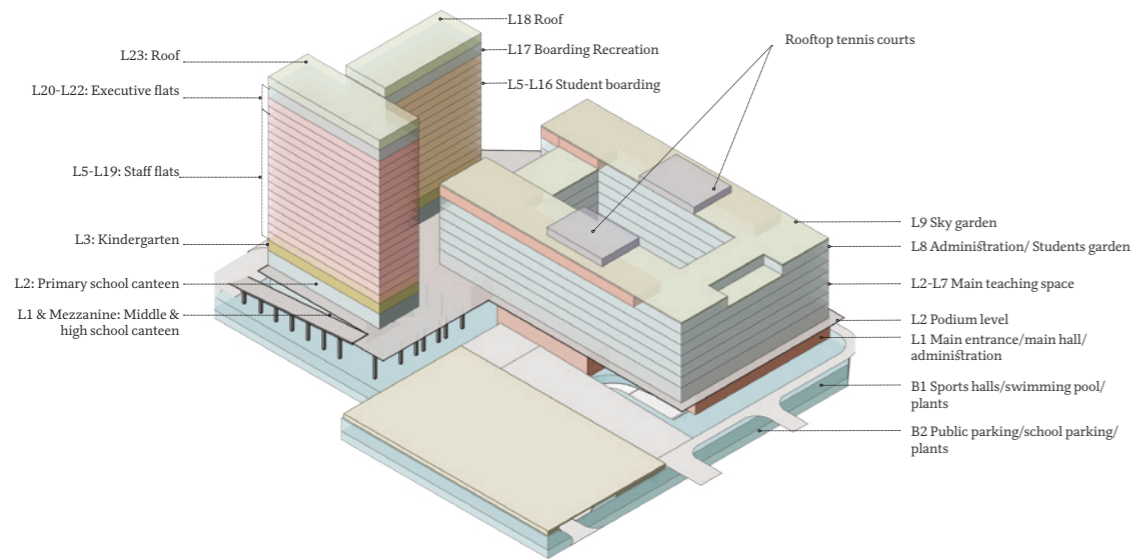
Professional Portfolio

William Wang

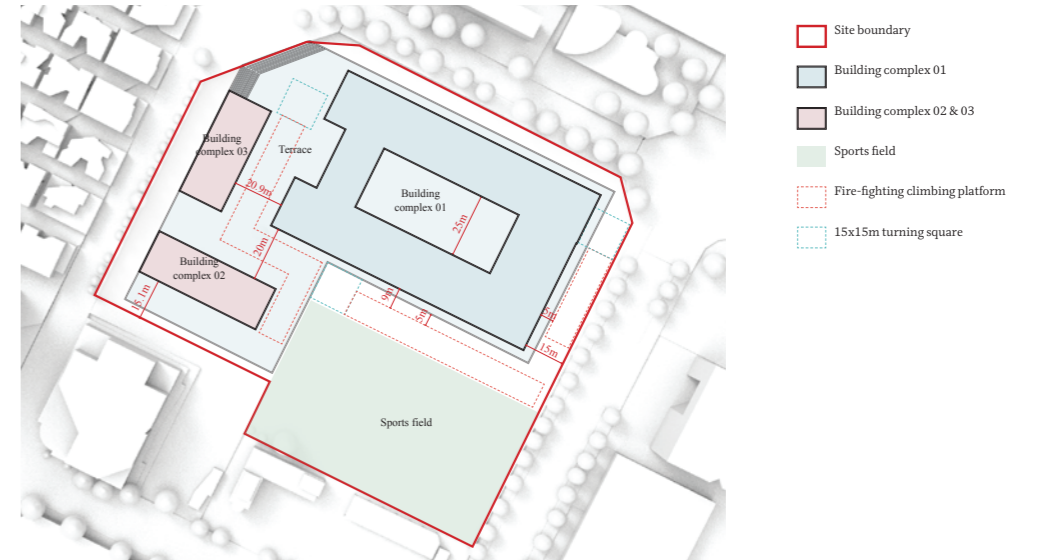
Broadstone Academy.

Broadstone Academy occupies a 24,688m² site at Chiwan Bay in Shenzhen. The project involves the construction of a new 2000-student academy, boarding facilities, as well as local amenities required by local government.

Working with local consulting firms, Walters and Cohen Architects is delivering the project to ensure the quality and architectural intent stays true to the original vision. My involvement focuses on the main school building, which includes consultant coordination and drawing review.

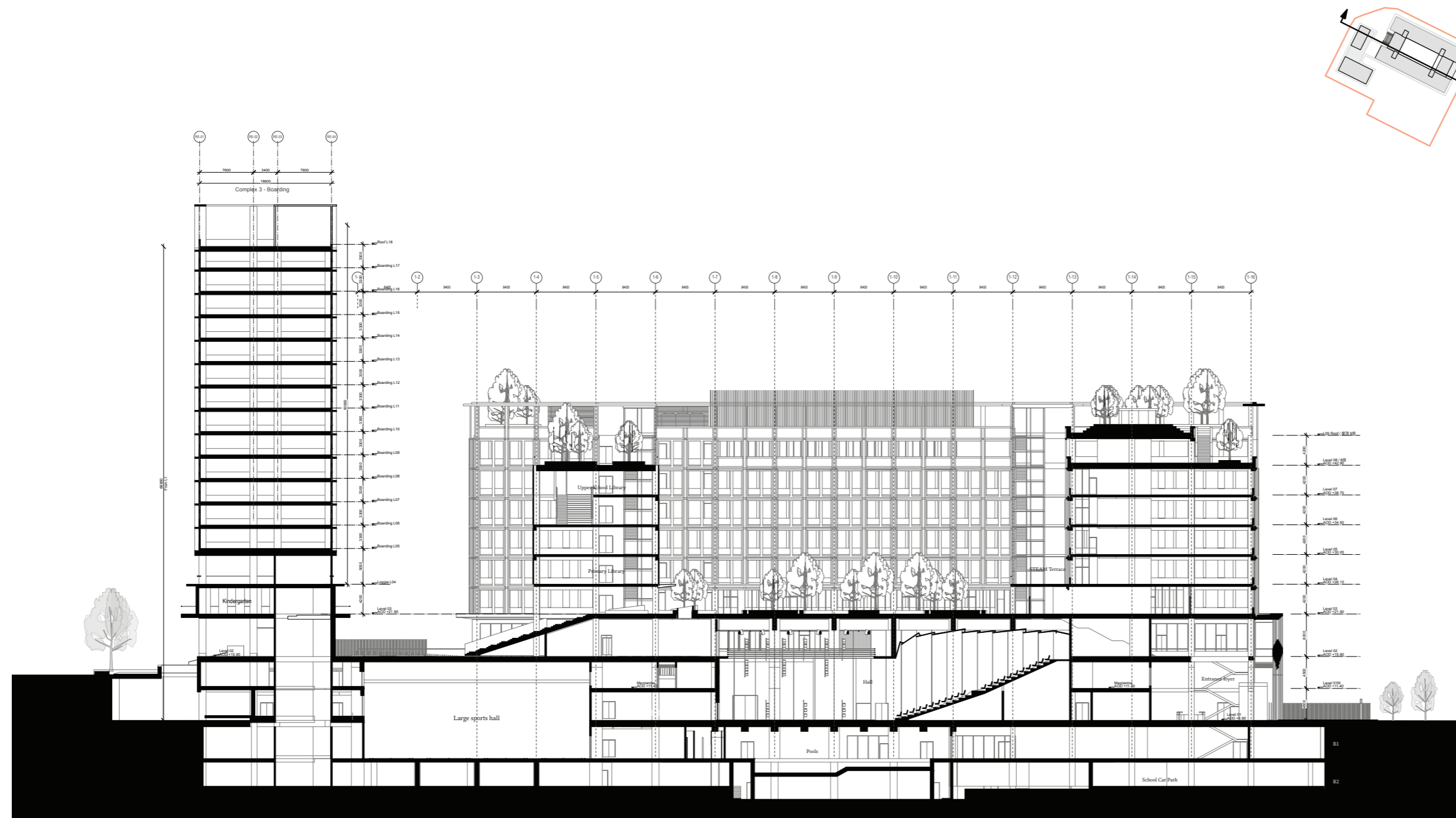


Site Area: 24,688m²
Total Construction Area: 132,319.51m²
School (General Teaching NIA): 56,300m²

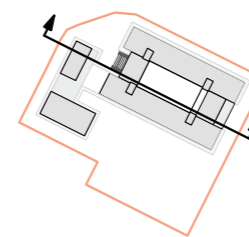


Broadstone Academy. Shenzhen.

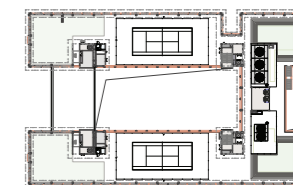
Involvement: RIBA Stage 2-4



Long Section



Roof



Level 8



Level 7



Level 6



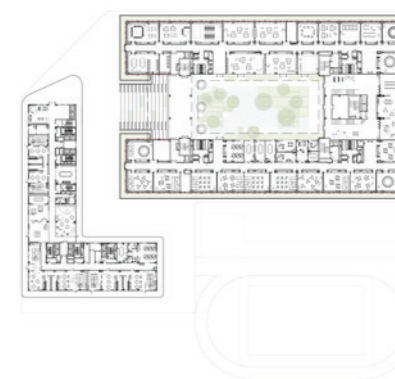
Level 5

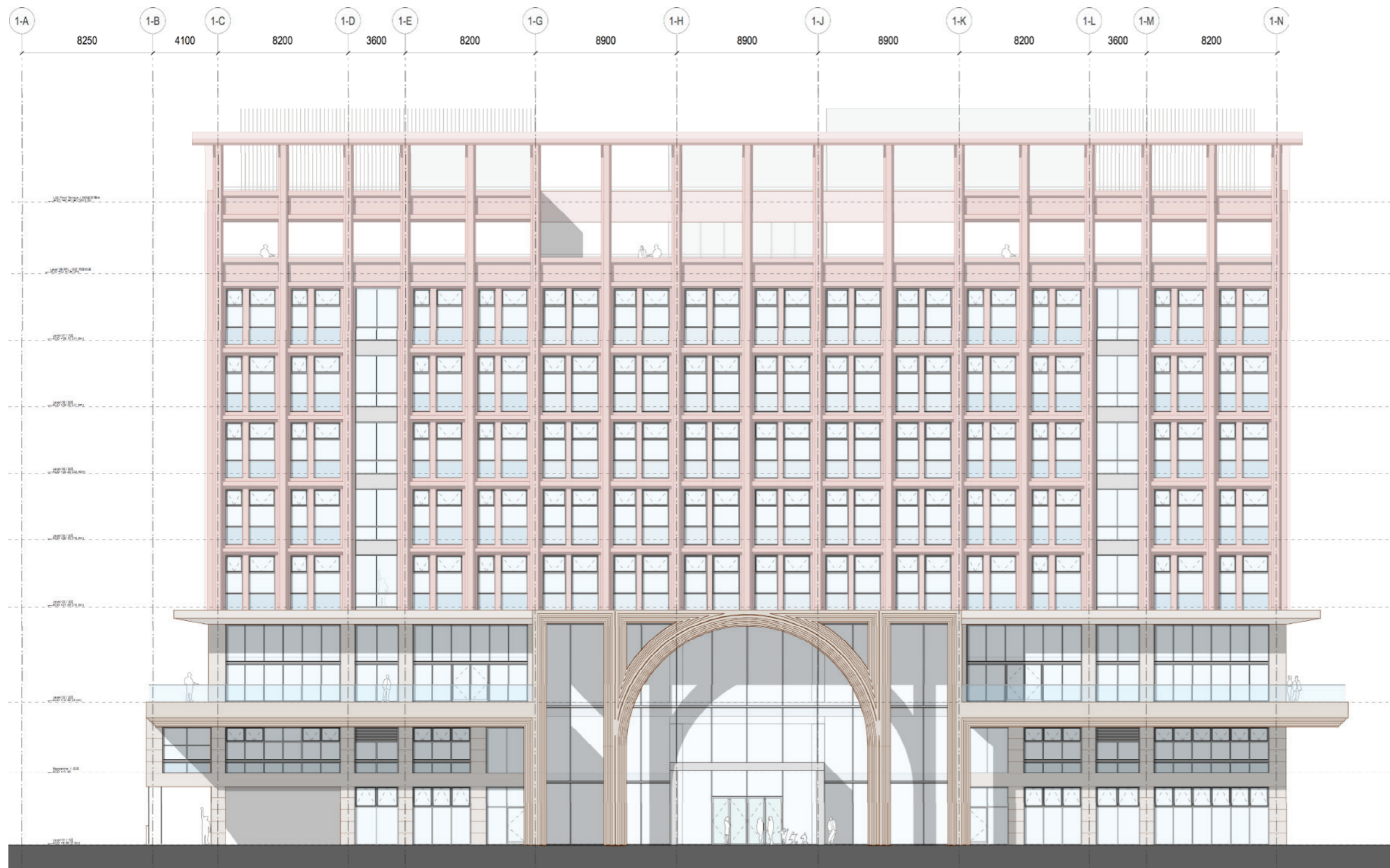


Level 4



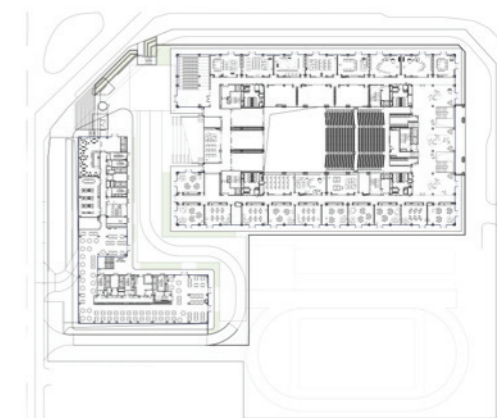
Level 3



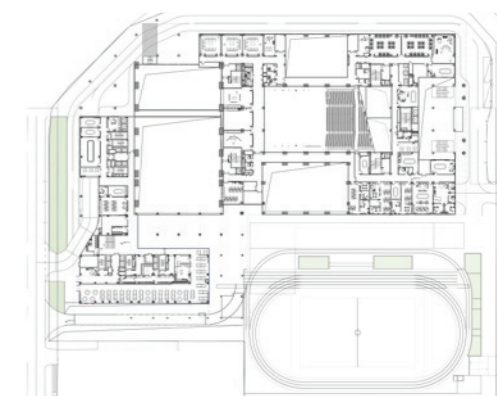


East Elevation

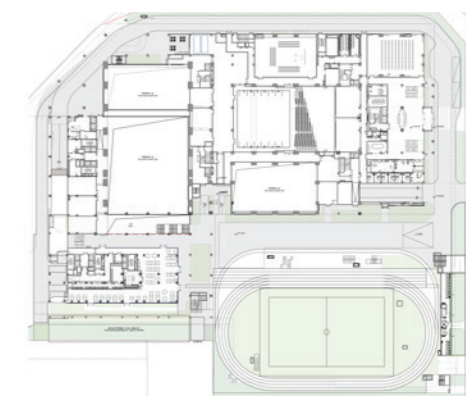
Broadstone Academy. Shenzhen.
Involvement: RIBA Stage 2-4



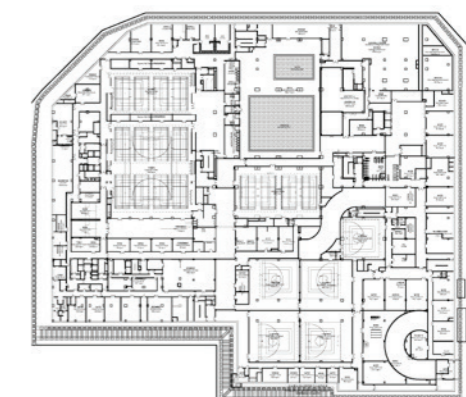
Level 2



Mezzanine



Level 1



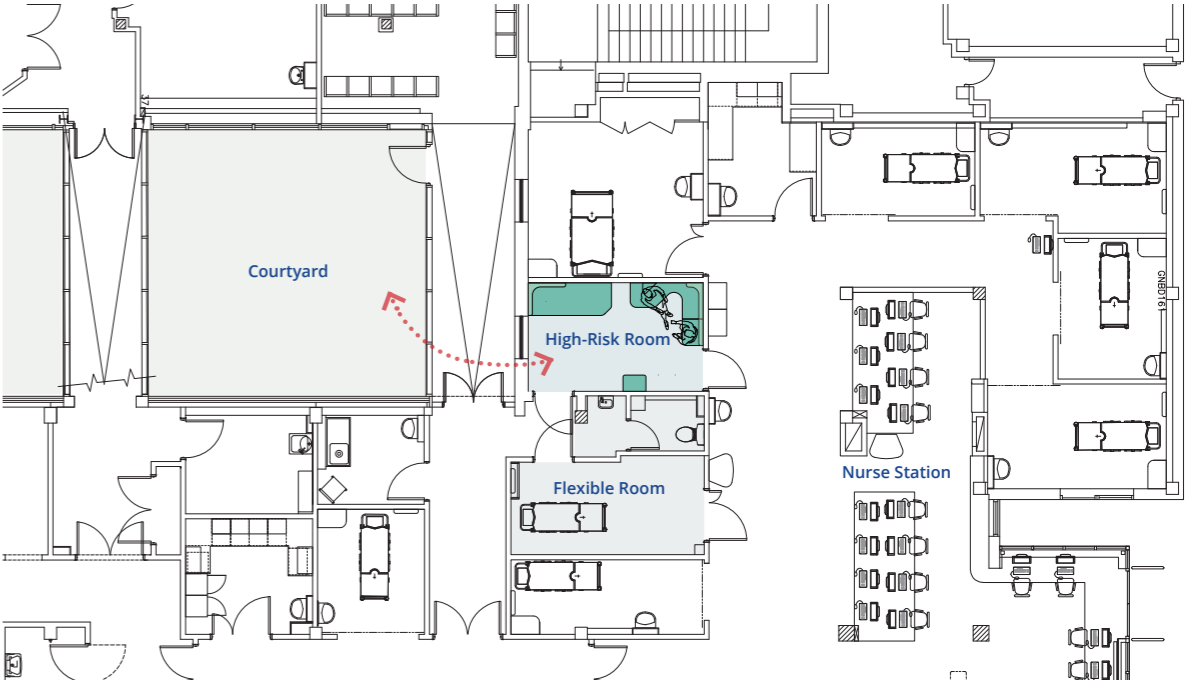
Basement B1

Exploring Spatial and Experiential Mental Health Patient Journey
Charing Cross Hospital

This began as my research project for my master’s degree. The project evolved into a collaboration between me and Imperial College NHS Trust. The project aimed to improve the experience of mental health patients in the emergency department (ED). Qualitative, patient-centred research and the collaboration between researcher zand hospital resulted in a major rethink of the typical high-risk mental health patient rooms in the ED, balancing safety and wellbeing. The design improved acoustic insulation, integrated lighting design, introduced gentle stimuli and natural light and took a holistic approach to the scheme (room dimension, colour, materiality, furniture, security, services).

The research involved interviews, focus groups and collaboration between the researcher, patients, clinicians and other stakeholders. The new patient room opened in 2019. The next phase will evaluate the implemented design, quantify the differences for users and extend the facility outdoors.

There were three research streams: examination of past models, implementation of the design as a model for the present and the future of mental health patient pathways in the ED.



Research Project. Charing Cross Hospital. London.
Involvement: RIBA Stages 1-6



Existing GP Practice



Reference Images



New Site



Option 3 Area Schedule			
Room Type			Notes
Consulting Room	17	rooms	5 rooms 8-12m ² ;
			7 rooms 12-16m ² ;
Treatment	4	rooms	5 rooms >16m ²
			18 m ²
Reception	22.7	m ²	Free-standing bespoke reception desk and office area behind
Staff Area at Reception	22.3	m ²	
Additional Staff Area	0	m ²	n/a
Total Reception/Staff Area	45	m ²	

Back of House	184.4	m ²	Incl. mezzanine - 140.9m ²
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WC			
Female	4	no.	
Male	2	no.	2 extra urinals
Disabled	1	no.	
Staff	0	no.	
Changing place	1	no.	
Additional Area			
Pharmacy	19.1	m ²	
Genius Bar: Education/Engagement Area	30.7	m ²	Double height space, direct natural light and street presence
Lobby/Forum	63.7	m ²	Medium sized lobby gathering space. Additional waiting areas in large corridors

Proposed (Option 3) Ground Floor Plan

Key	
	Consultation Rooms
	Treatment Rooms
	Reception / Staff Area
	Pharmacy
	Clear ceiling height
	'Genius Bar' / Education area
	Display 'Garden'
	Clear ceiling height

Cambridge Assessment, Cambridge.

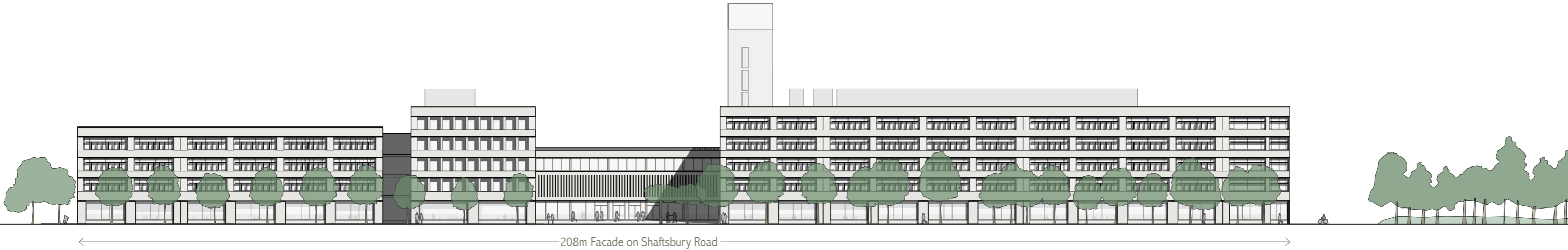
Completed in 2018, the master plan delivered 350,000 ft² of net internal area for Cambridge Assessment, a non-teaching department of the University of Cambridge. The development consists of 4-5 storey buildings positioned around carefully landscaped gardens and offers a mix of spaces including an auditorium, a library and a film studio.

The scheme recognises the prominence of the site and proposes to celebrate the new identity of Cambridge Assessment with a clear and ambitious architectural statement, visible as one approaches Cambridge from the railway. Within this masterplan is a 39m tower which was a planning challenge the office overcame with extensive discussion with local planning department. The end result involved the collaboration with artists Vong Phaophanit and Claire Oboussier.



Aerial View (Tower height 35.1m)

Aerial View (Tower height 39.1m)



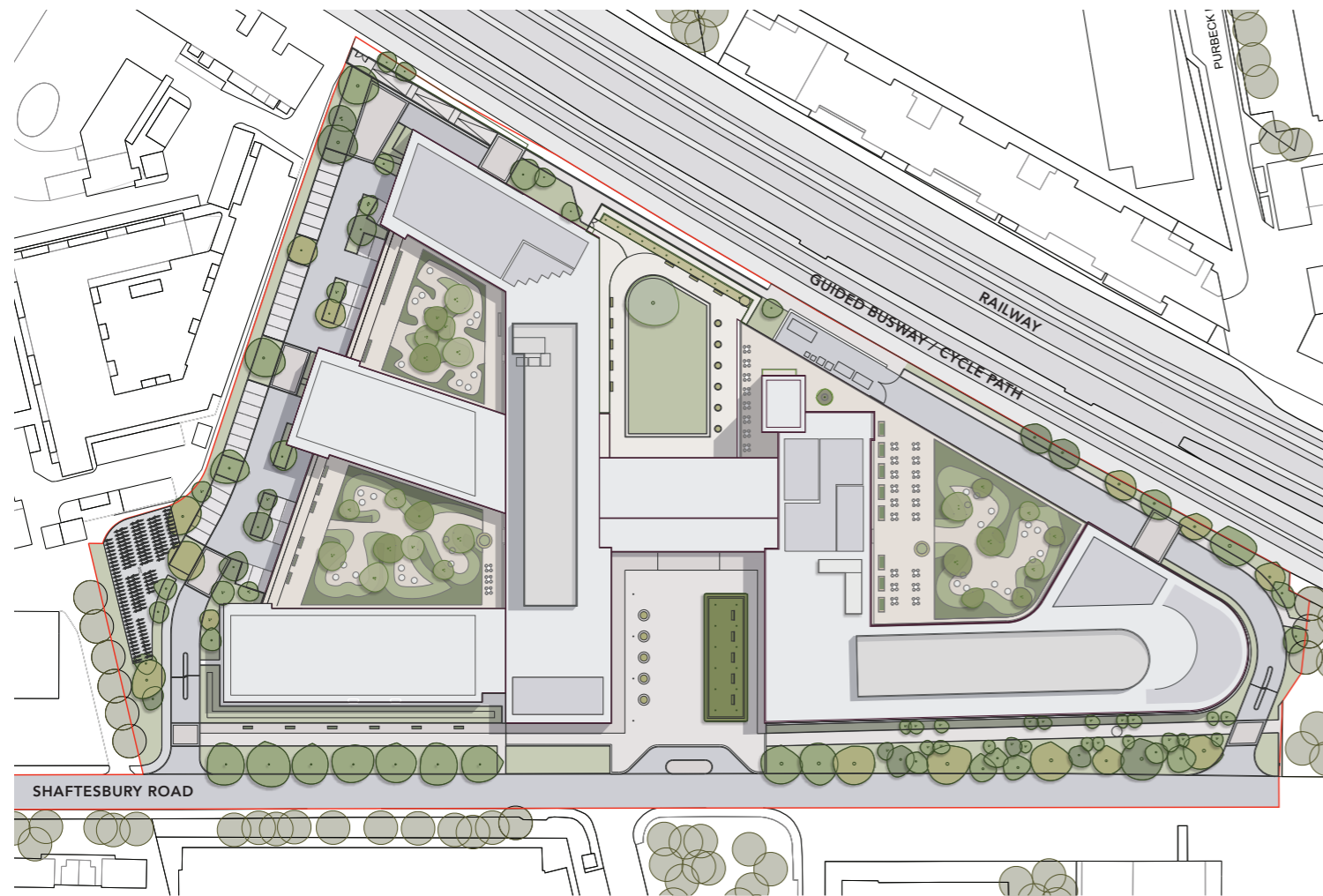
West Elevation. Shaftsbury Road.

Cambridge Assessment Headquarter. Cambridge.

Involvement: RIBA Stage 1-3

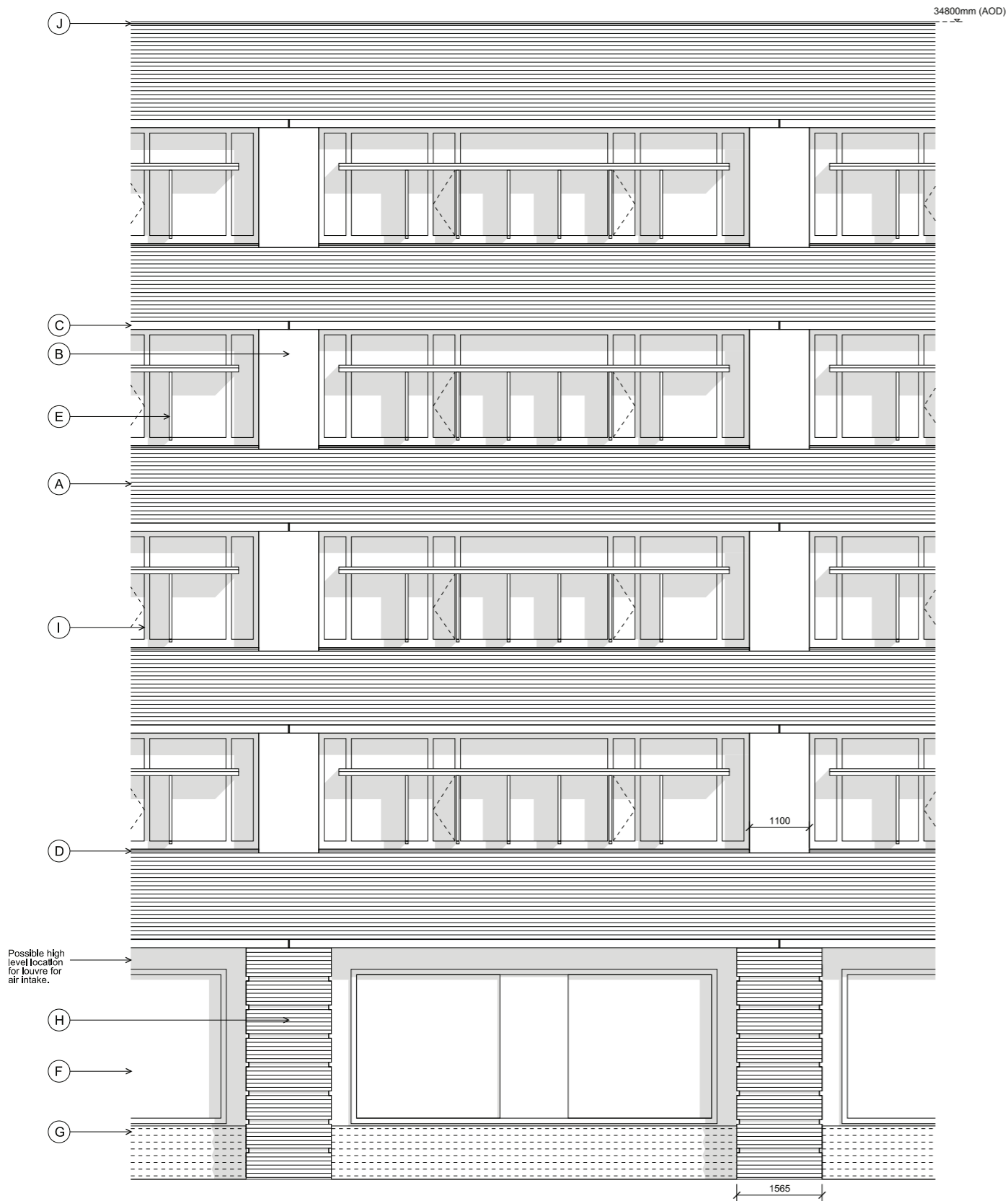
The scheme approached the sustainability issue holistically, such that the environmental strategies were integrated in the architectural design. It utilized the large roof space and proposed installation of 1500m² of PV panels, meeting the 10% renewable target for Cambridge City Council. Studies were done to account for the relatively dense occupancy profile (8sq m/person) which inform the 40% glazing of the façade and installation of a chilled beam system. The massing also took account of maximizing natural daylight, creating narrow (20m) width floor plates and generous floor to ceiling heights.

I was the project architect who secured the planning permission for the project, working solely with a director, producing all necessary documentation. I was part of a larger team post planning, responsible for façade coordination. This project was delivered on both Revit and Microstation, I worked on both programs.

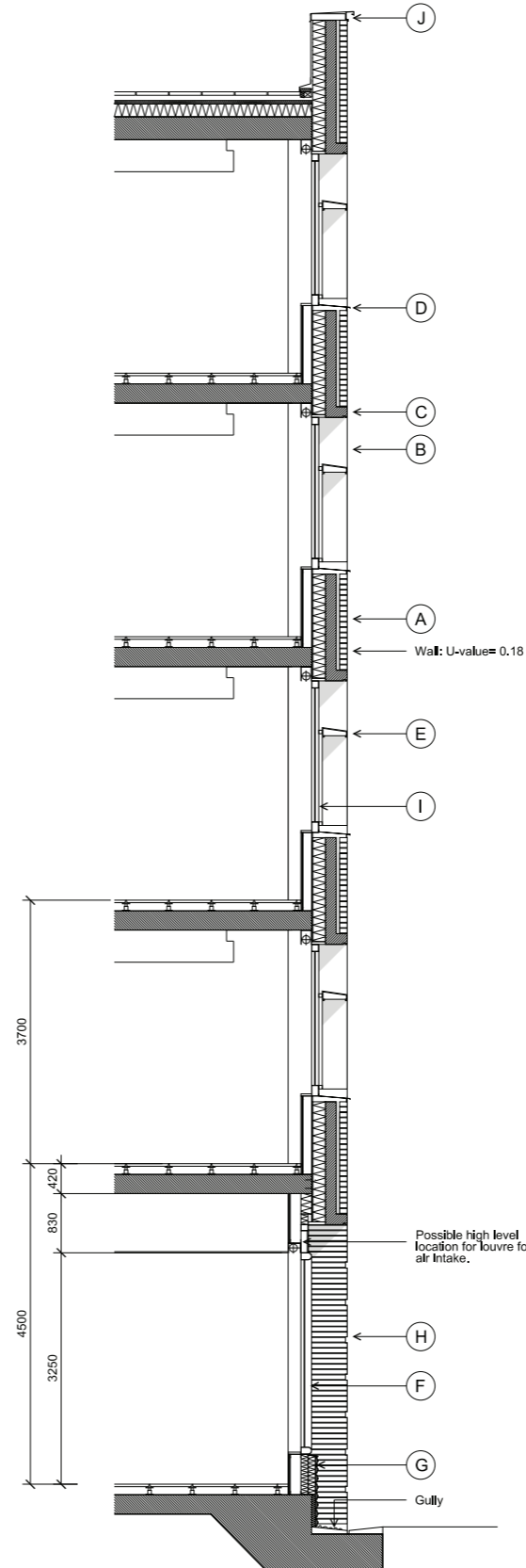


Cambridge Assessment Headquarter. Cambridge.

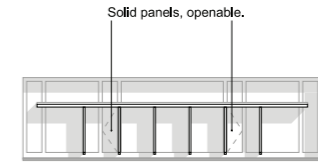
Involvement: RIBA Stage 1-3



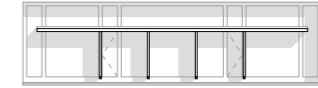
Main Facade Elevation. 1:100



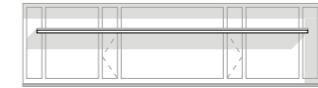
Main Facade Section. 1:100



Brise Soleil Type : BS1 (standard type)
6 Vertical brise soleil



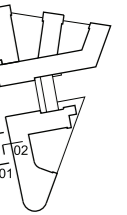
Brise Soleil Type : BS2 (Located at south facing 'prow')
4 Vertical brise soleil



Brise Soleil Type : BS3
0 Vertical brise soleils

Window Variations

- Key
- (A) Hand set brick work
 - (B) Off white precast concrete pier
 - (C) Off white precast concrete lintel
 - (D) Profiled aluminium cill
 - (E) Anodised aluminium brise soleil
 - (F) Ground floor windows
 - (G) Profiled metal plinth panel
 - (H) 9 inch rusticated brickwork piers
 - (I) Powder coated aluminium window frame and cill
 - (J) Profiled powder coated aluminium coping

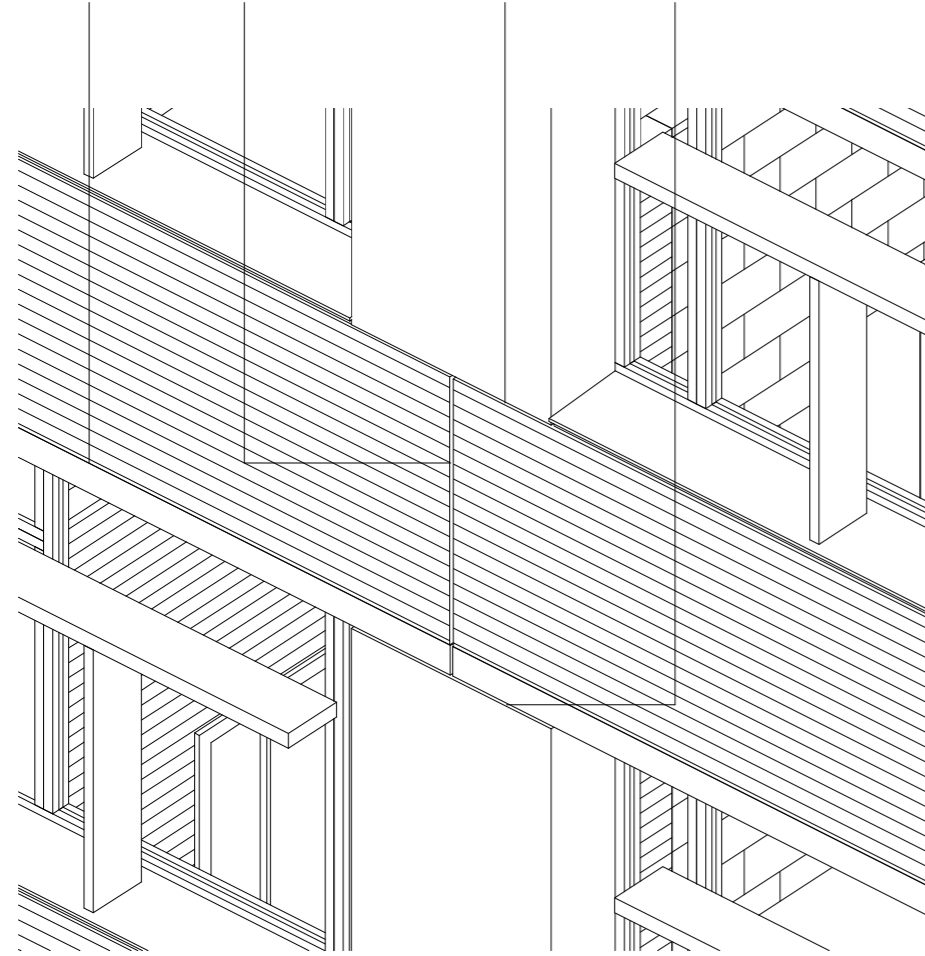


20mm slip joint between precast lintel and first brick course

20mm movement joint in brickwork every 27m (see GA elevations for setting out)

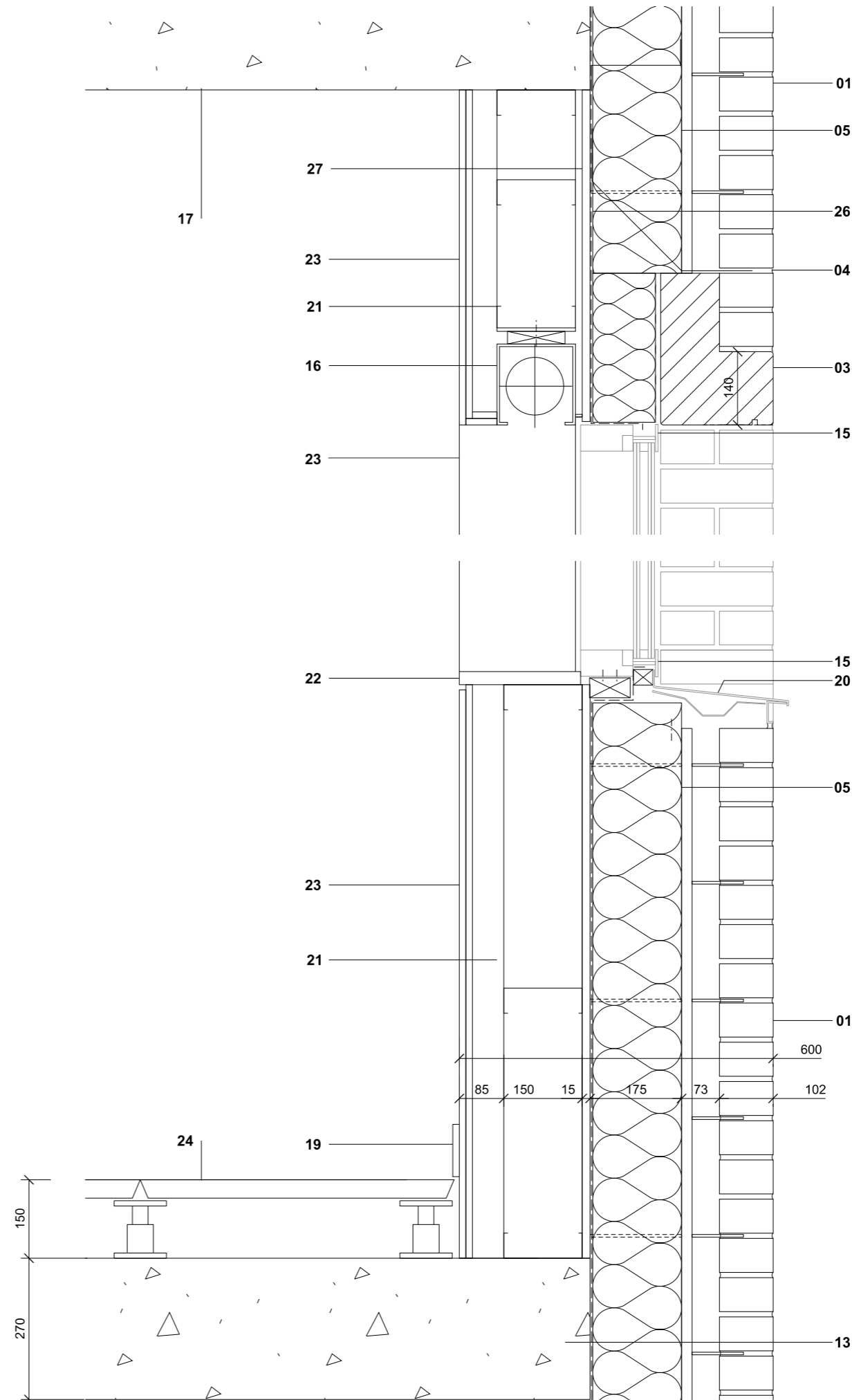
15mm soft joint between precast pier and final brick course

15mm hard joint between precast lintel and pier



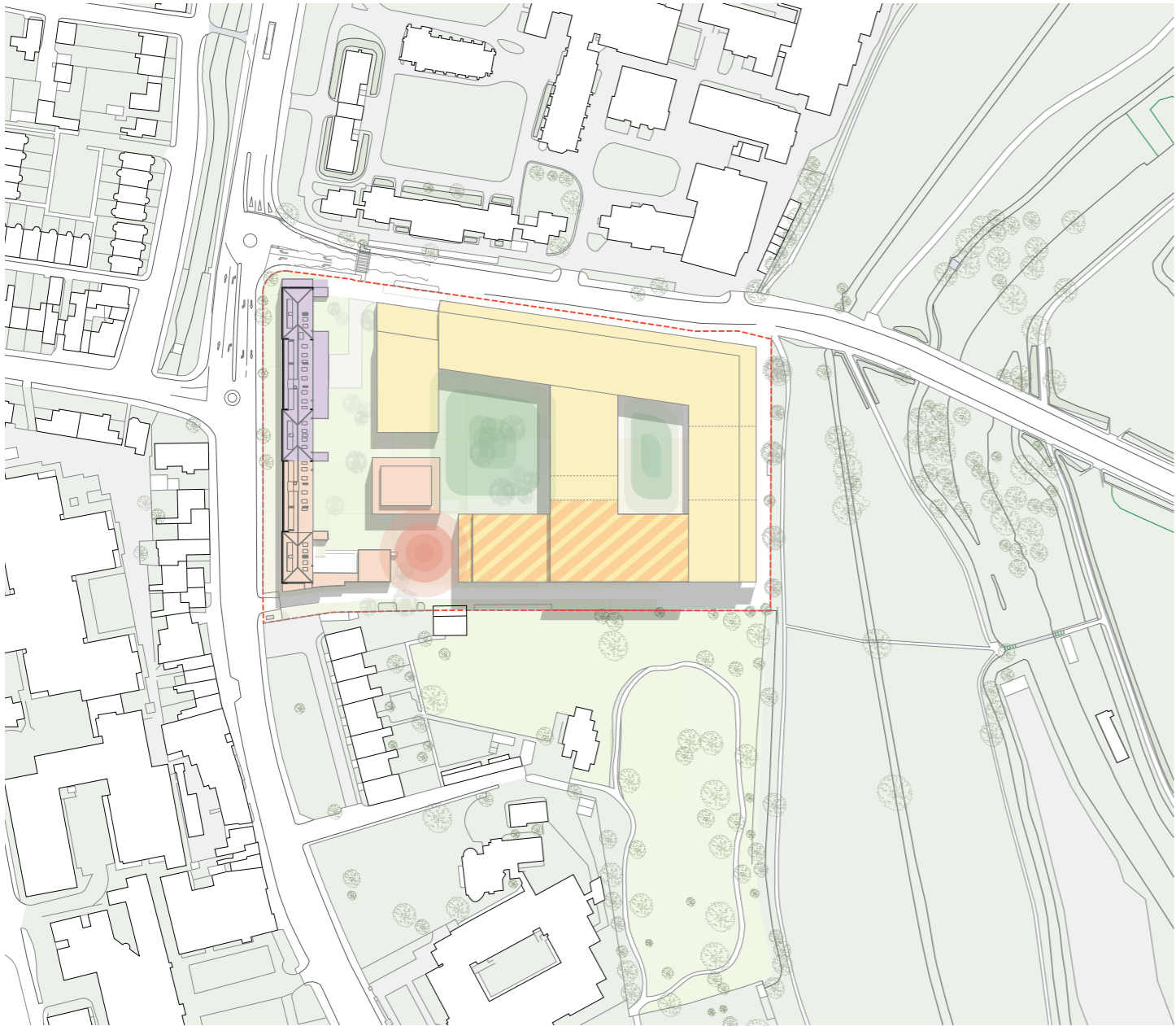
Facade Type A3 Movement Joints

Facade Type A2 1:10



KEY: Facade Type A1 & A2

- 01 Hand set brick work with lime mortar joints
- 02 Precast Concrete Panel
- 03 Precast Concrete lintel
- 04 Weep holes at set centres to drain cavity
- 05 Insulation
- 06 Aluminium parapet coping, 3mm thick (PPC Qualicoat 2)
- 07 Weatherboard with smooth finish (Eternit or similar)
- 08 Pebble margin
- 09 Concrete paviours on pedestals
- 10 Rigid insulation
- 11 Liquid applied inverted roof waterproofing
- 12 Galvanised angle and termination bar
- 13 Concrete slab
- 14 3mm thick aluminium closer piece, anodised
- 15 Aluminium windows (PPC Qualicoat 2)
- 16 Internal blind box
- 17 Exposed Concrete soffit
- 18 Chilled beams (indicative)
- 19 3mm anodised aluminium brise soleil extrusion, supported off brackets with countersunk fixings
- 20 Aluminium window cill, 3mm thick (PPC Qualicoat 2)
- 21 Metsec framing or similar
- 22 Internal solid timber window sill and lining to window
- 23 Plasterboard lining, painted
- 24 Raised floor
- 25 Concrete columns
- 26 Metal louvres (PPC Qualicoat 2) with insect mesh to back face
- 27 Blind box, aluminium extrusion
- 28 Suspended ceiling
- 29 Internal steel window frame with curved aluminium extrusion caps to external glazing (PPC Qualicoat 2)
- 30 Cold rolled steel support framework to bay window
- 31 20mm Solid timber window cill and returns, painted
- 32 Profiled metal panel (PPC Qualicoat 2)
- 33 Precast skirting
- 34 Plasterboard lining, painted with solid timber skirting
- 35 Rebate to shop window, cladding panel, aluminium (PPC Qualicoat 2)
- 36 Laminated clear safety glass
- 37 Shadowbox, laminated safety glass, fritted with insulated backing pannel, aluminium to inside face (PPC Qualicoat 2)
- 38 Internal steel window frame with aluminium extruded profile
- 39 Insulated aluminium panel to GF window returns (PPC Qualicoat 2)
- 40 Rusticated hand set brick pier

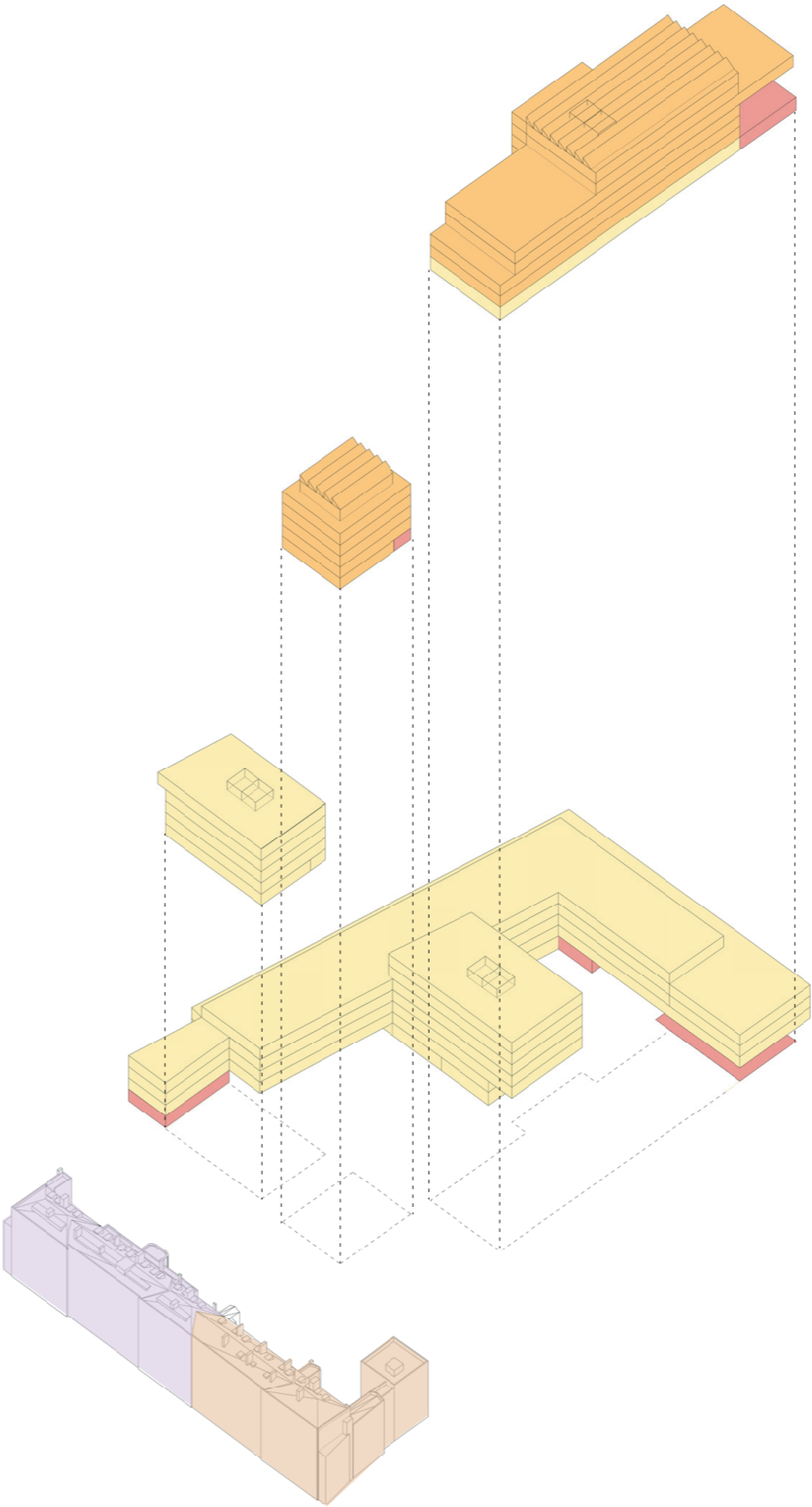


Masterplan Aerial



Long Section

Involvement: RIBA Stages 1-3



- Academic
- Flexible Space
- Office
- Hotel

The North Wing

Cultural/academic use will be positioned on the northern edge of the site, overlooking Peterhouse gardens . Part of the building could offer flexible use office space.

The Stand-Alone Building

The proposed block provides an opportunity at the south of the Academic Square that could characterize the square . Preferably, this block will be entirely used by the University, although it could also be leased out in parts as flexible office spaces.

Office Buildings

Office blocks set along Fen Causeway to the South and Coe Fen to the West, forming two main courts in the centre .

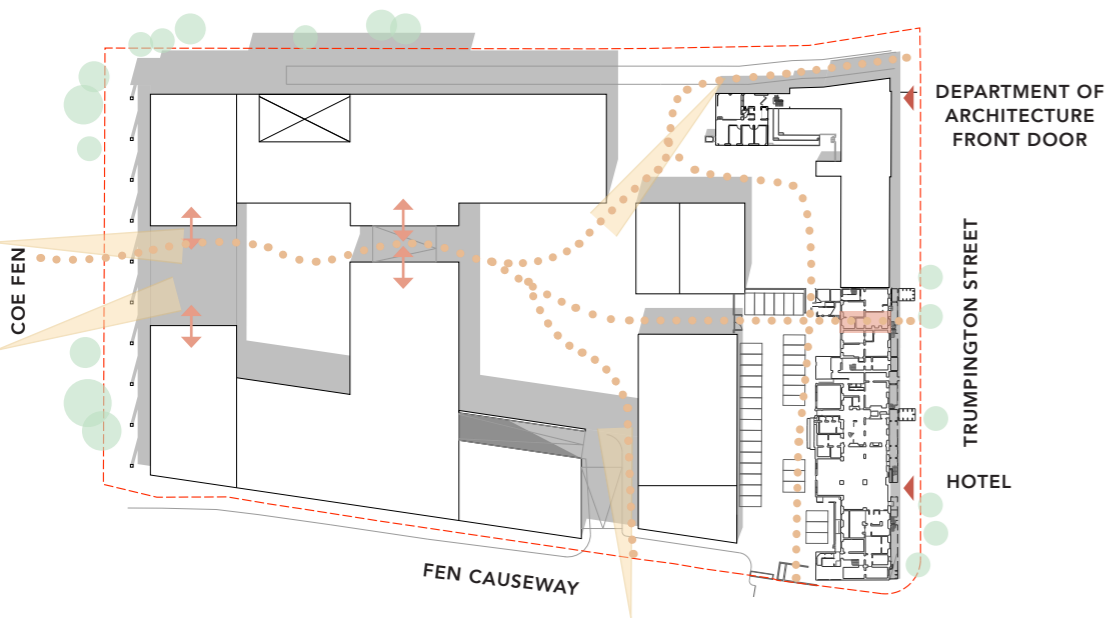
Hotel

Keep the existing footprint of Royal Cambridge Hotel . Redevelopment will be subject to chosen hotel operator proposals . There is the possibility of a new build wing to the rear of Scroope Terrace or alternatively a landscaped foreground including car parking .

Department of Architecture and History of Art

Keep the existing footprint of the department in Scroope Terrace . All facilities to be refurbished . There are additional spaces provided as part of the Academic Square which the faculty can grow into .

Permeability on Ground Floor



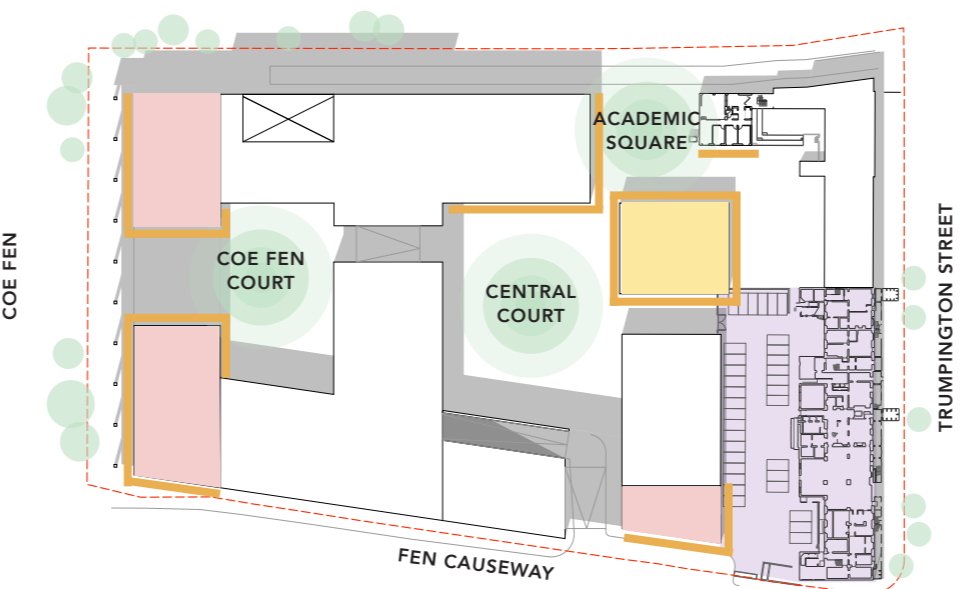
Further assessments on the ground floor openings were carried out. The proposal will allow openings of varying widths and heights at the base of the urban block.

In addition a gateway through the existing Scroope Terrace is proposed, subject to a more quantitative analysis in the next stage, to mark the more civic nature of the proposals and enable direct access to the new facilities and urban realm to the rear of Scroope Terrace.

This reinforces spatial and physical connections between the public courts on site and their immediate surroundings. It enables glimpses into the new urban block from Coe Fen and Fen Causeway which will encourage use of the public realm. Once inside, the openings allow views outwards towards Coe Fen to the west, as well as connection to Fen Causeway to the South, Trumpington Street to the east and Peterhouse to the west.

- Sightline into the courtyards
- Visual and physical connections
- Flexibility in masterplan layout
- Possible Gateway through existing Scroope Terrace

Courts and Squares



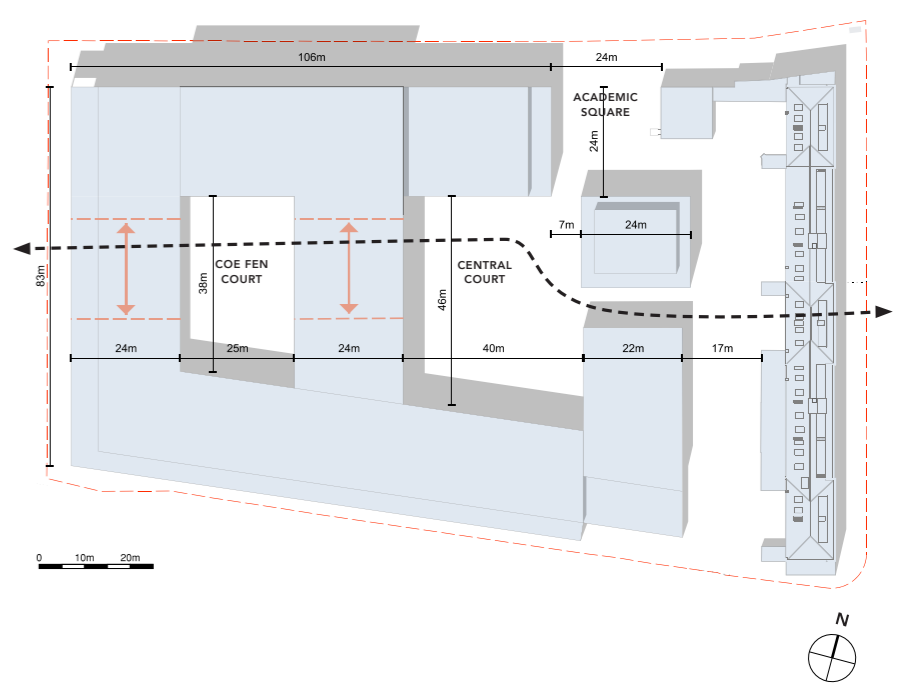
Three main public spaces have been developed:

- The Academic Square with the Pavillion Building and the existing Colin St John Wilson Building to the east
- The Central Court
- The West Court opening up to Coe Fen

All three spaces will be enforced by active frontages and associated F+B / leisure facilities with a high quality landscape design and permeable buildings that allow visual connections.

- Activated academic square
- Stand alone building
- Activate frontages
- F+B/Retail Use
- Existing Royal Cambridge Hotel - redevelopment by future chosen hotel operator

Stage 1C Massing Principles



The analysis reinforced the following characteristics in the final recommendation:

- Generous court spaces at the centre of the site.
- Create a quantum of open space of over 50% of the site's footprint (approx 9.320 sqm of 19.590 sqm)
- Openings on the base with varying heights and widths to increase connections between public realms
- A stand-alone building defining the Academic Square and the entire site
- Active frontages in the form of leisure and retail facilities at the base of buildings, particularly on Coe Fen and along Fen Causeway

- Flexibility in masterplan layout for ground floor openings
- Permeability on Ground Floor

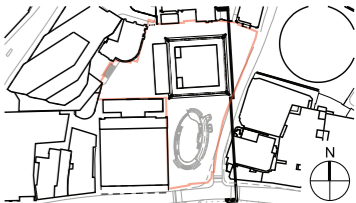
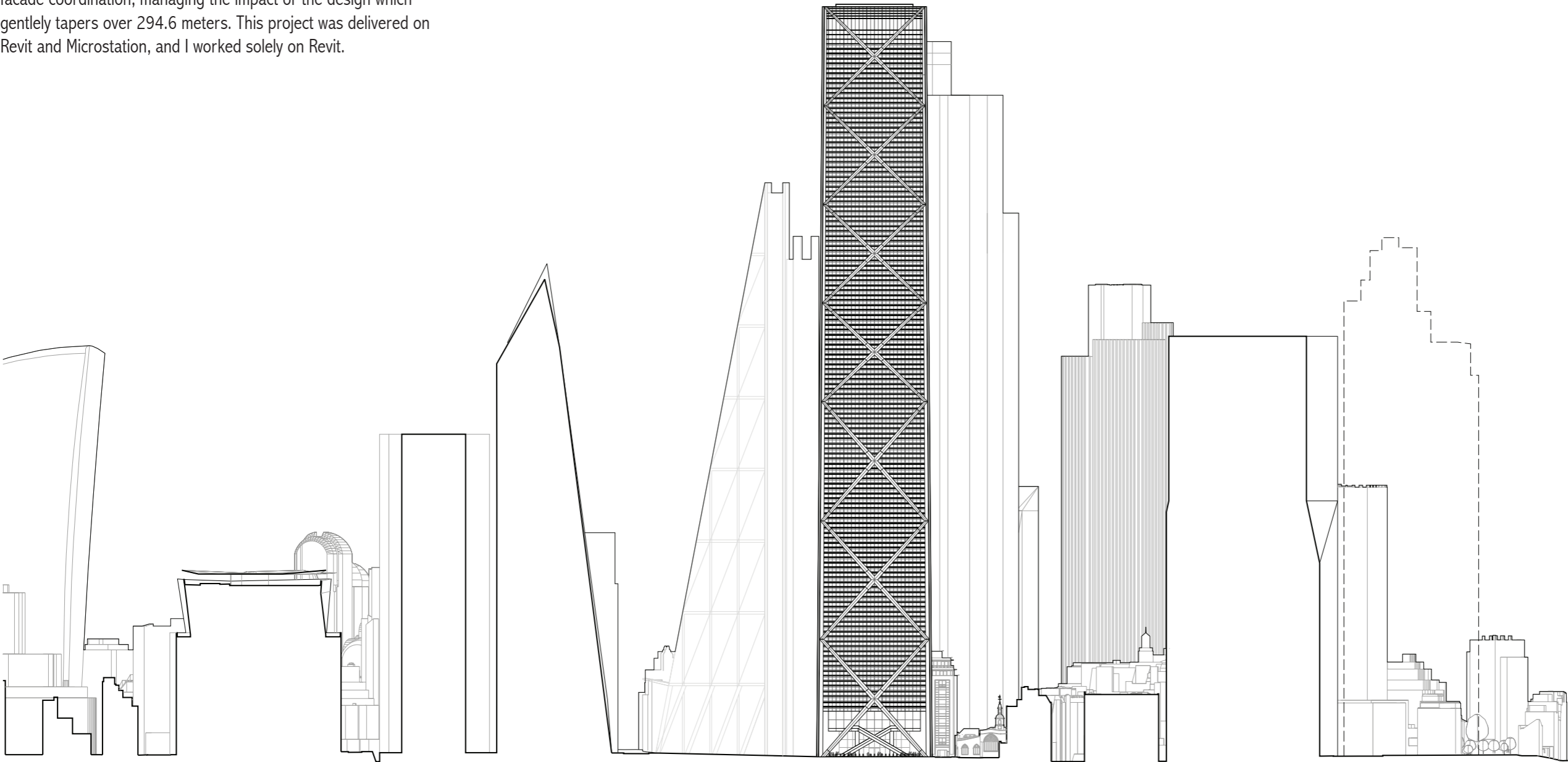
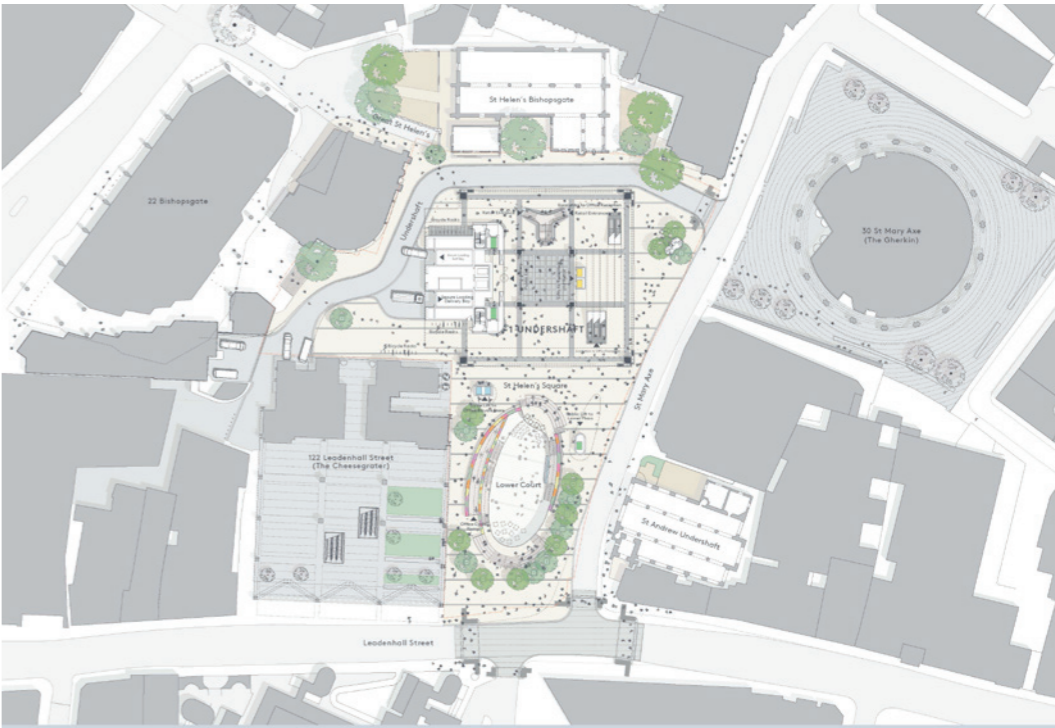
One Undershaft. London

The project is a skyscraper situated at the centre of the City of London. With the support of the City, the client for 1 Undershaft aspired to build the tallest tower north of the Thames.

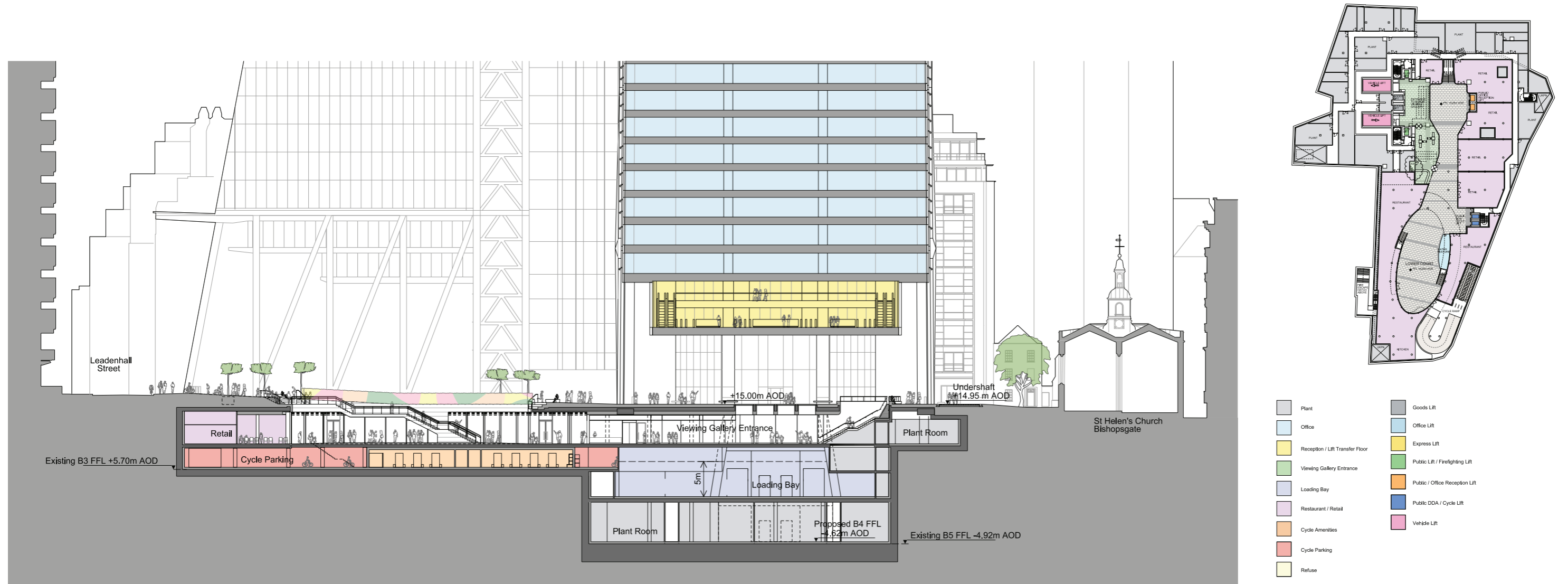
The 72 storey tower, which gained planning approval in 2016, is a slender building with a 45.2m square footprint to the north of the site, freeing up the southern end to provide over 2,500m² of generous public realm and incorporating extensive retail space.

Architecturally, the scheme adopts a material palette consisting of low-iron glass, white vitreous enamel and weathering steel. The intent was to create a skyscraper that is predominantly white, that can be easily maintained and stand the test of time.

My role included producing all schedules and managing coordination between the above ground and below ground teams. Due to the complexity of the project, the office undertook additional detailed design at planning stage. My focus was on structure and facade coordination, managing the impact of the design which gently tapers over 294.6 meters. This project was delivered on Revit and Microstation, and I worked solely on Revit.

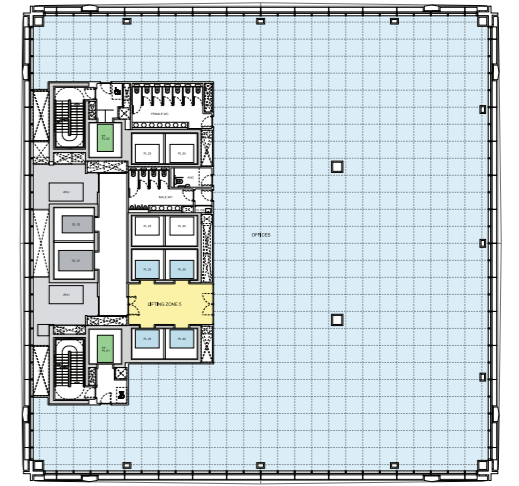
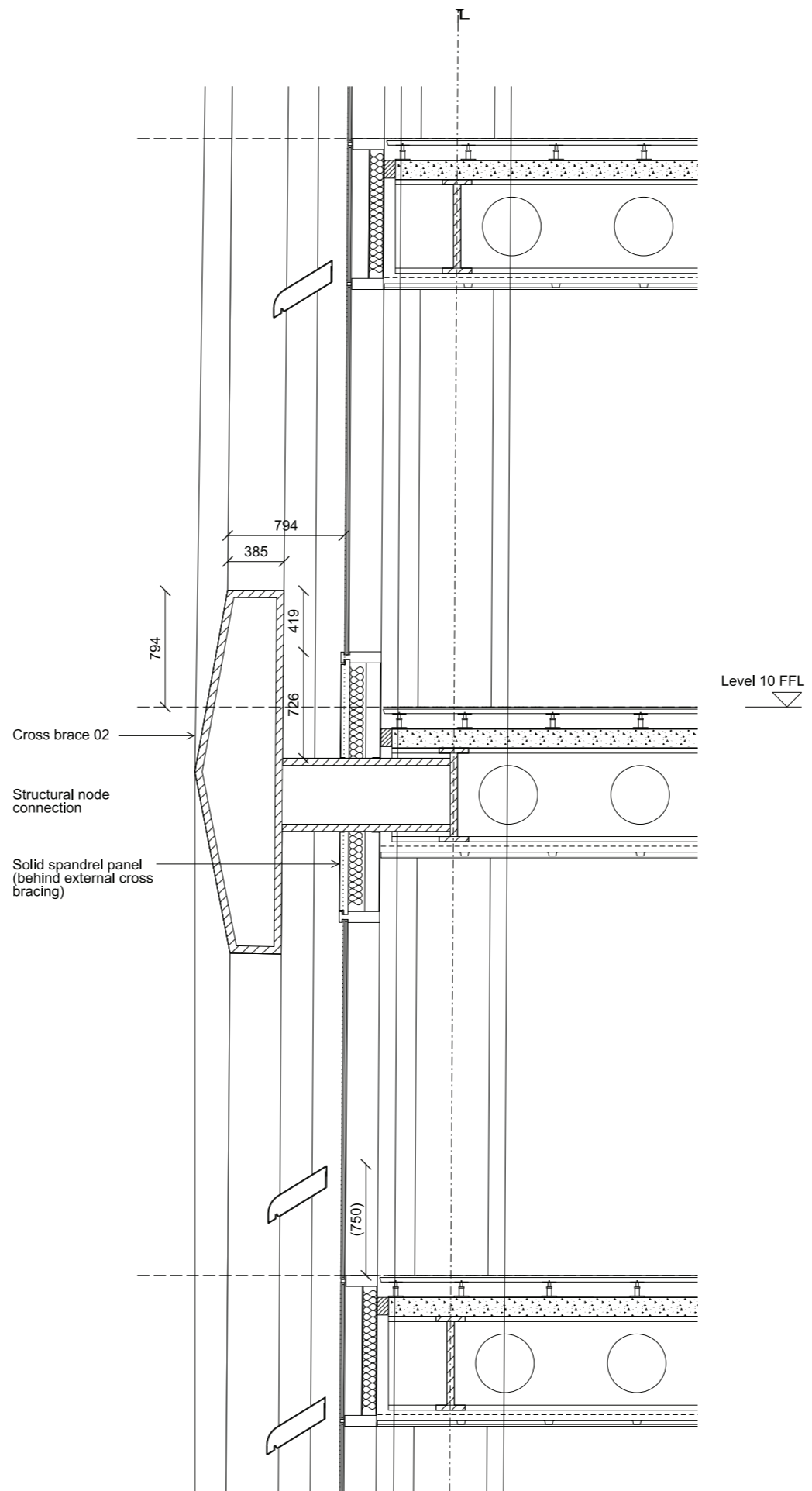
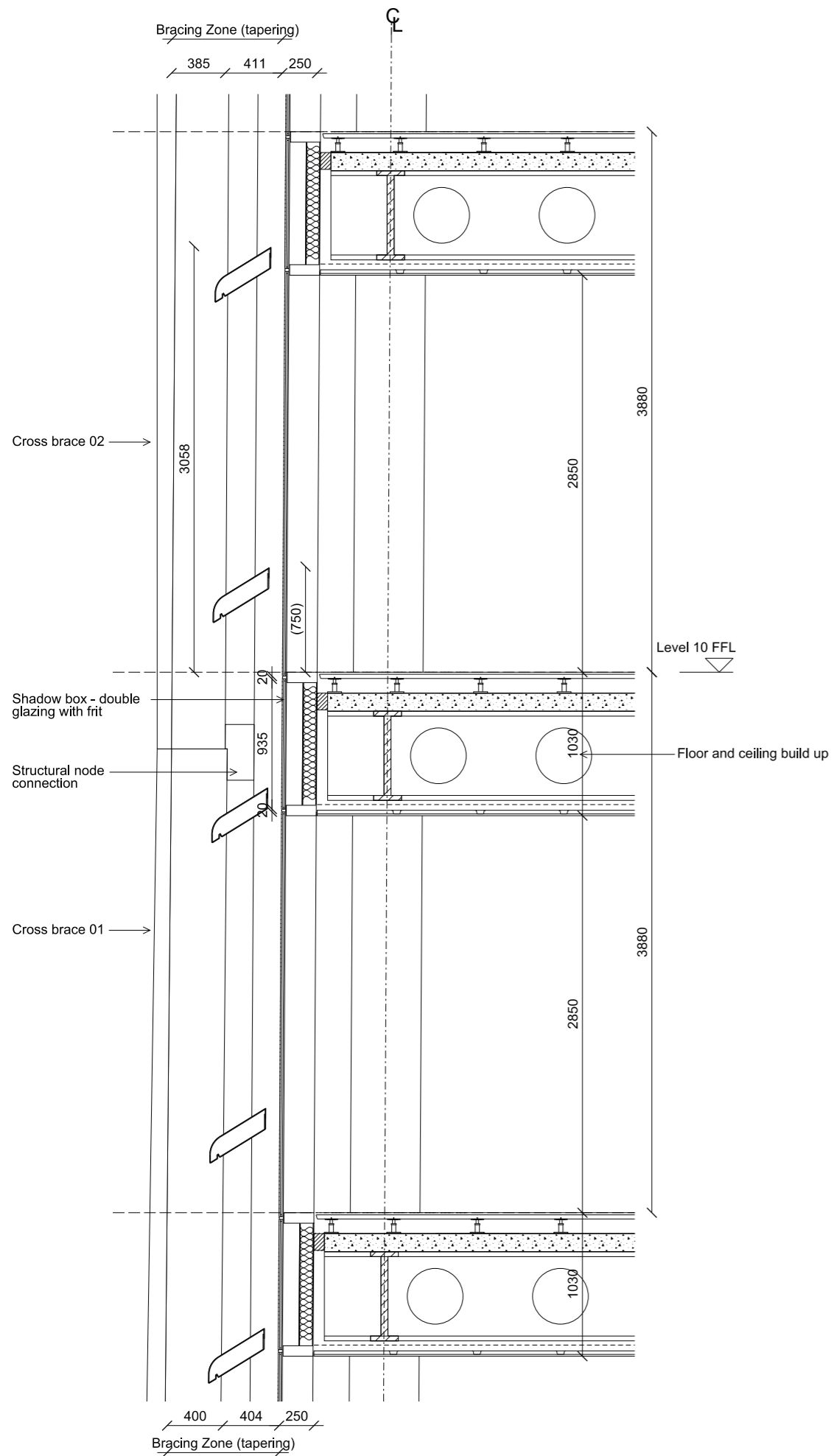


1 Undershaft. City of London.
Involvement: RIBA Stage 1-2

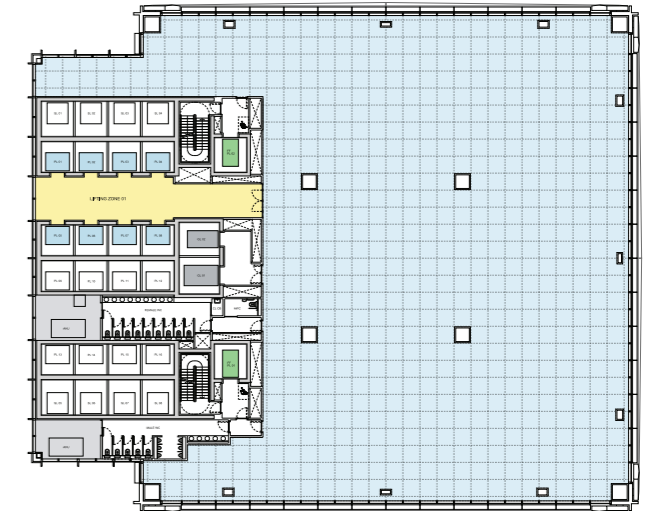


1 Undershaft. City of London.

Involvement: RIBA Stage 1-2



Plan: Level 55

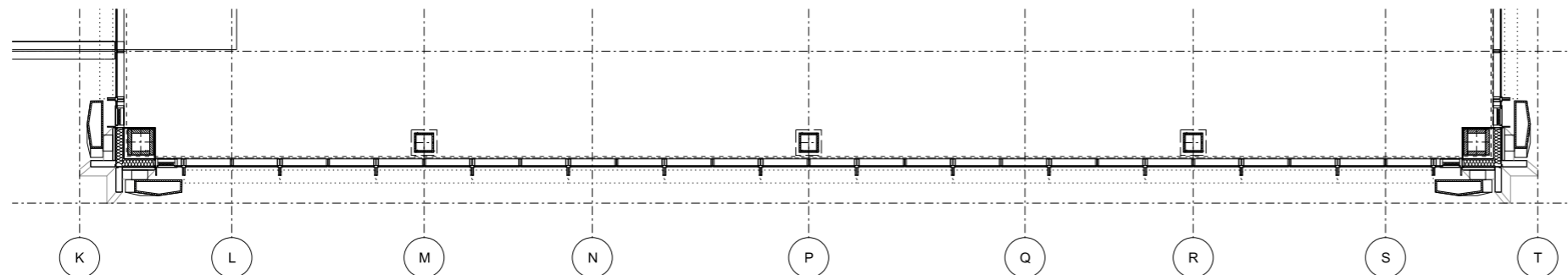


Plan: Level 10

1:20 Façade Details

01	Elevation - Glazing Panels
25 ELE 110	Zone 2 - Level 10 to 20 1: 100 @A1

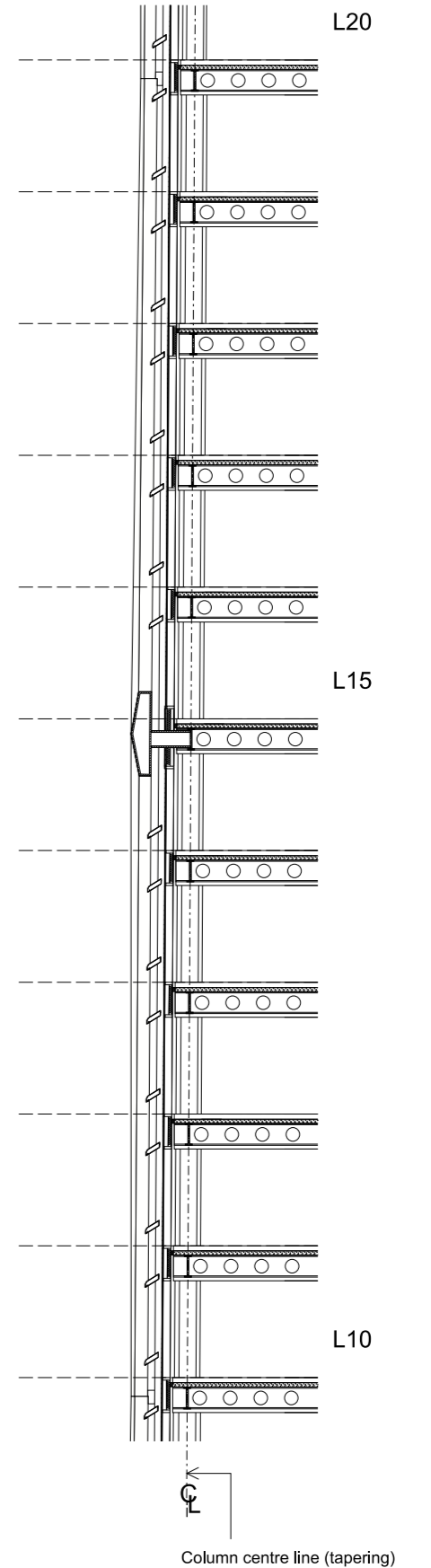
01	Plan (cut at FFL)
25 ELE 110	Level 10 1: 100 @A1



Section AA

Structural column
behind glazing

FFL +85360	Level 20	Office 18
FFL +81480	Level 19	Office 17
FFL +77600	Level 18	Office 16
FFL +73720	Level 17	Office 15
FFL +69840	Level 16	Office 14
FFL +65960	Level 15	Office 13
FFL +62080	Level 14	Office 12
FFL +58200	Level 13	Office 11
FFL +54320	Level 12	Office 10
FFL +50440	Level 11	Office 9
FFL +46560	Level 10	Office 8
Cut plane align to FFL		



03	Section AA
25 ELE 110	Zone 2 - Level 10 to 20 1: 100 @A1

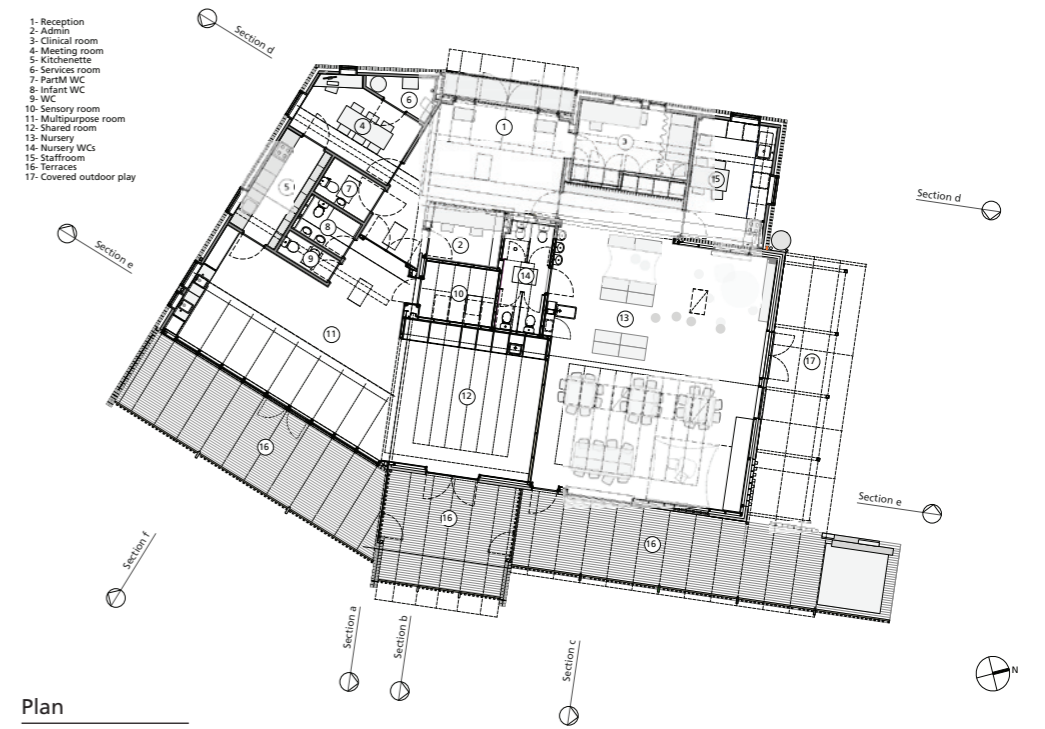
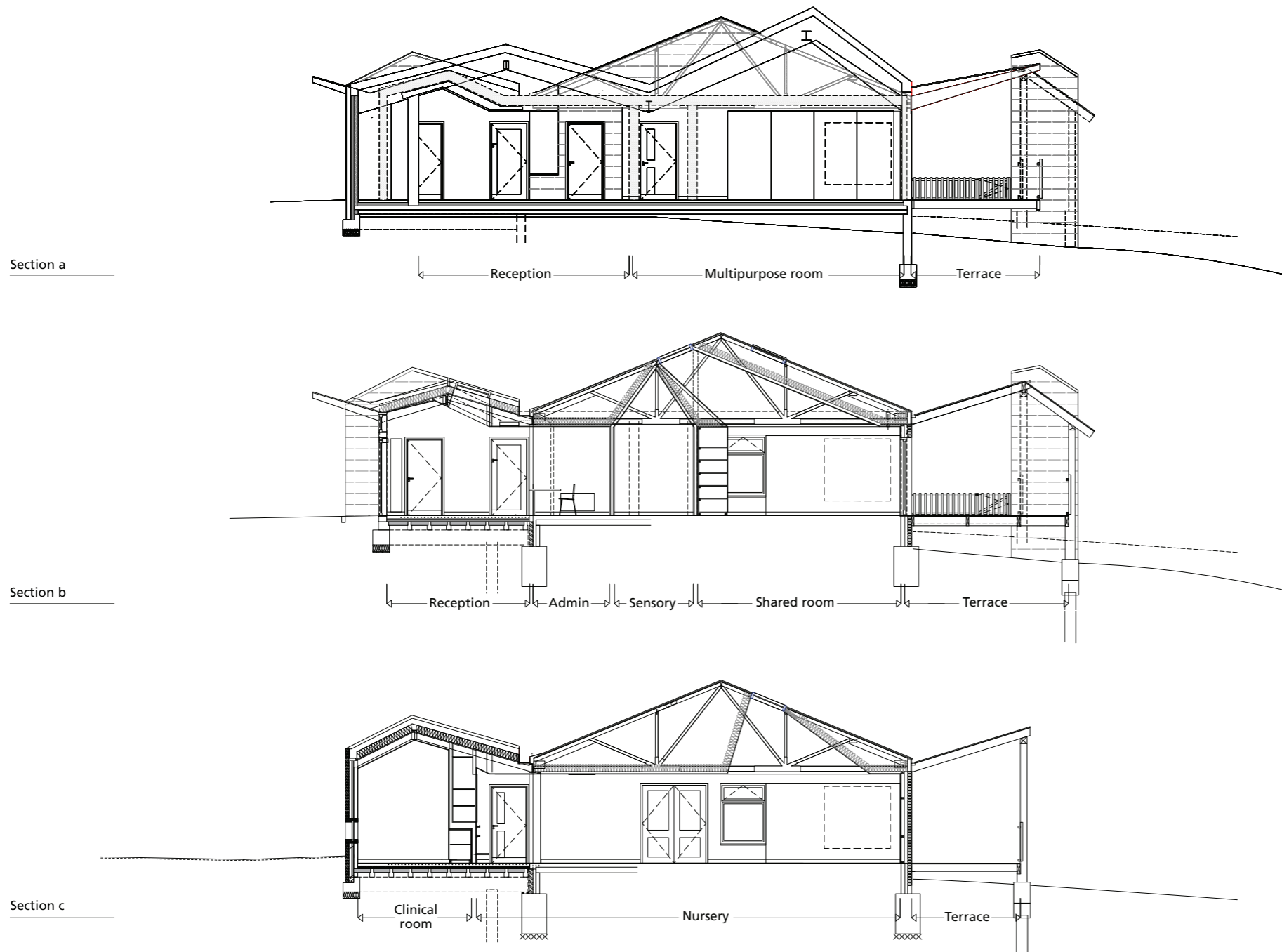
Cypress Children's Centre

The project was part of a larger masterplan of the school. The brief of the detached nursery aimed to transform an existing brick building to form a new children's centre. The proposal retained and exposed existing brickwork and extended the existing pitched roof to form a playful undulation above the timber-framed composition. New spaces were arranged around the retained structure to connect a series of multi-functional rooms. Outside of these spaces, a sequence of terraces and play areas gradually blend into the landscape.

My involvement in this project began at tender stage and included taking the project to completion working under a director.



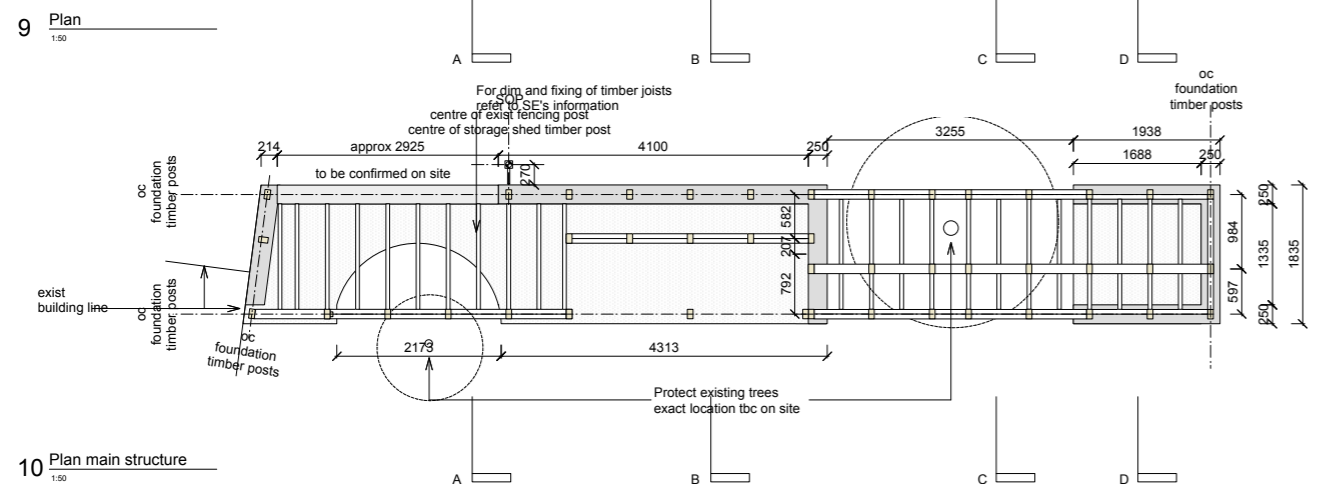
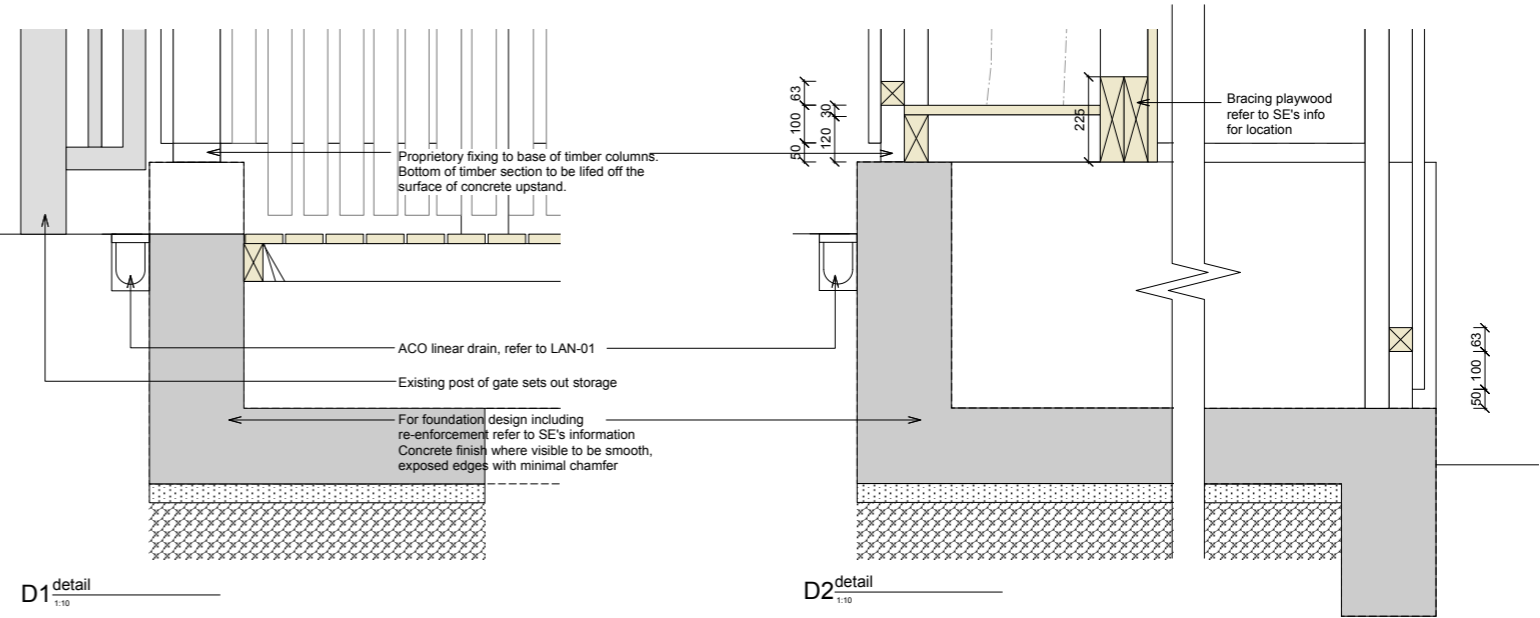
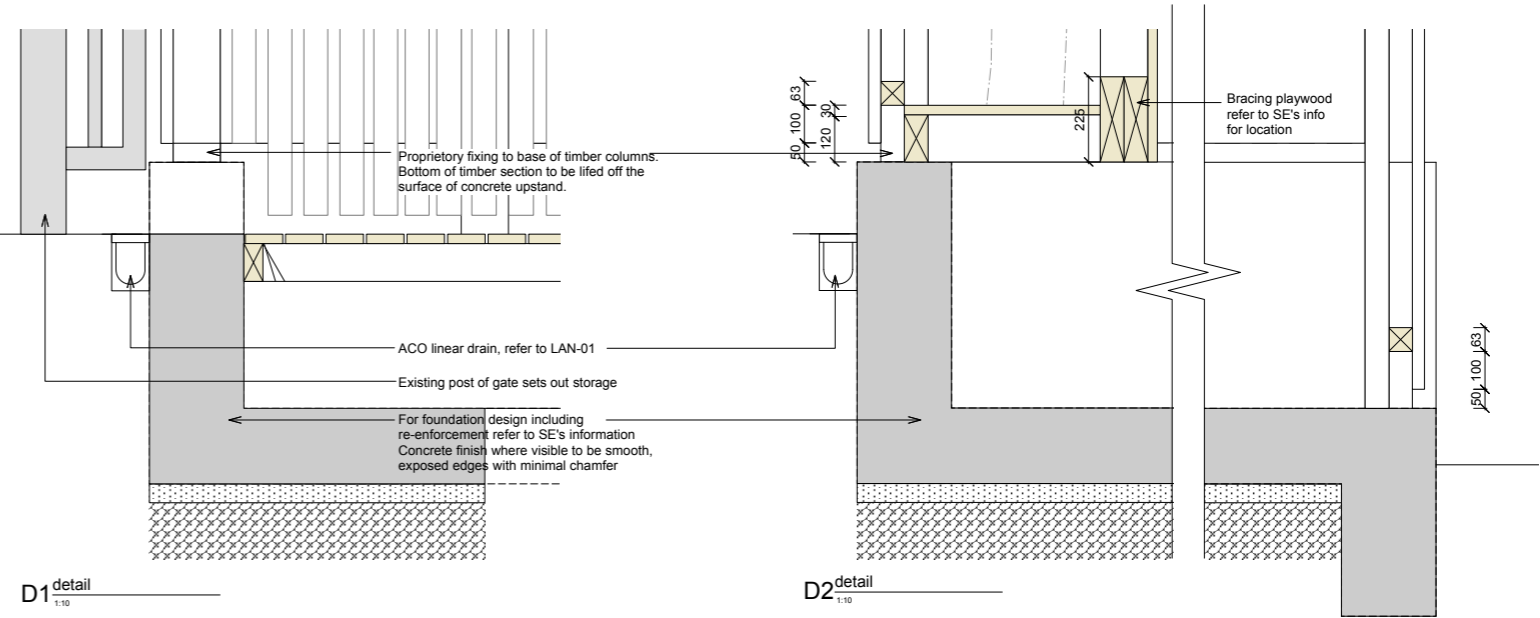
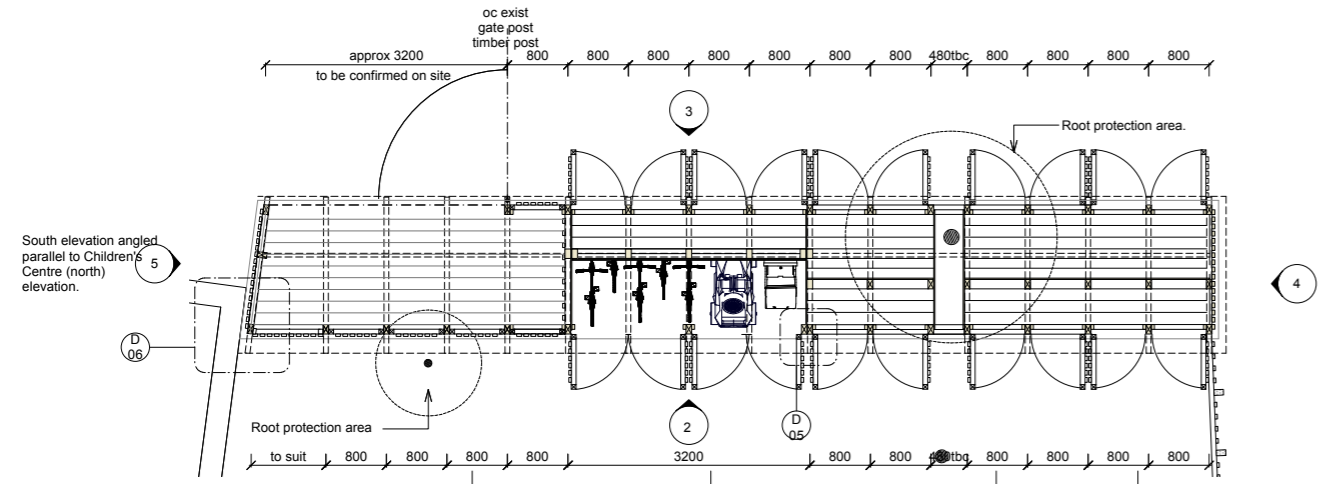
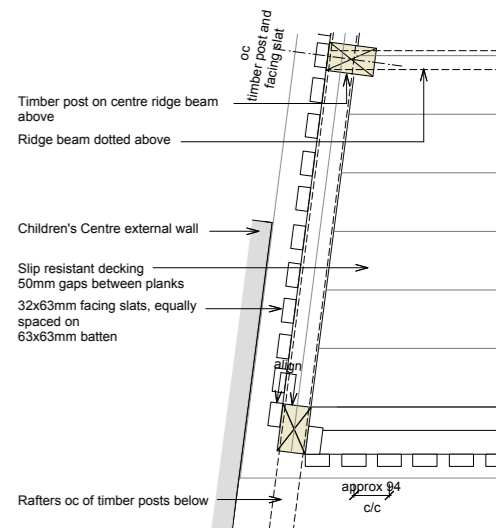
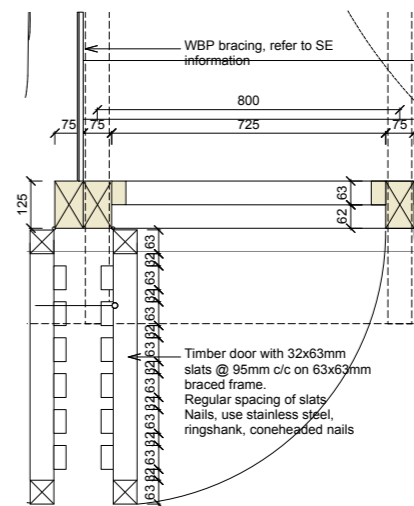
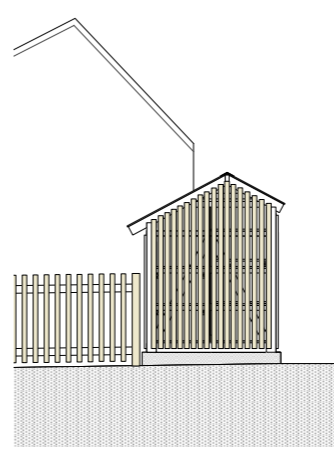
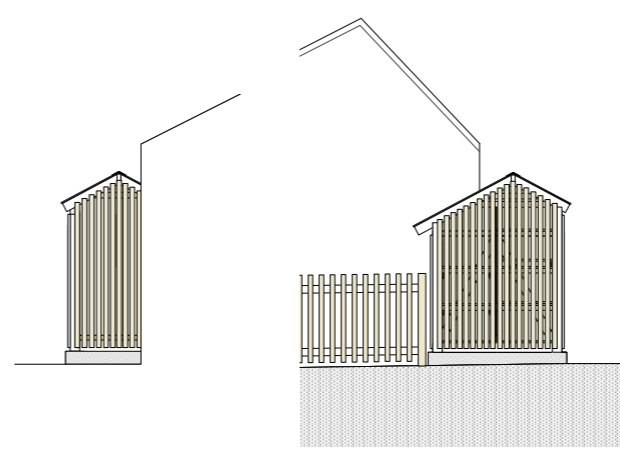
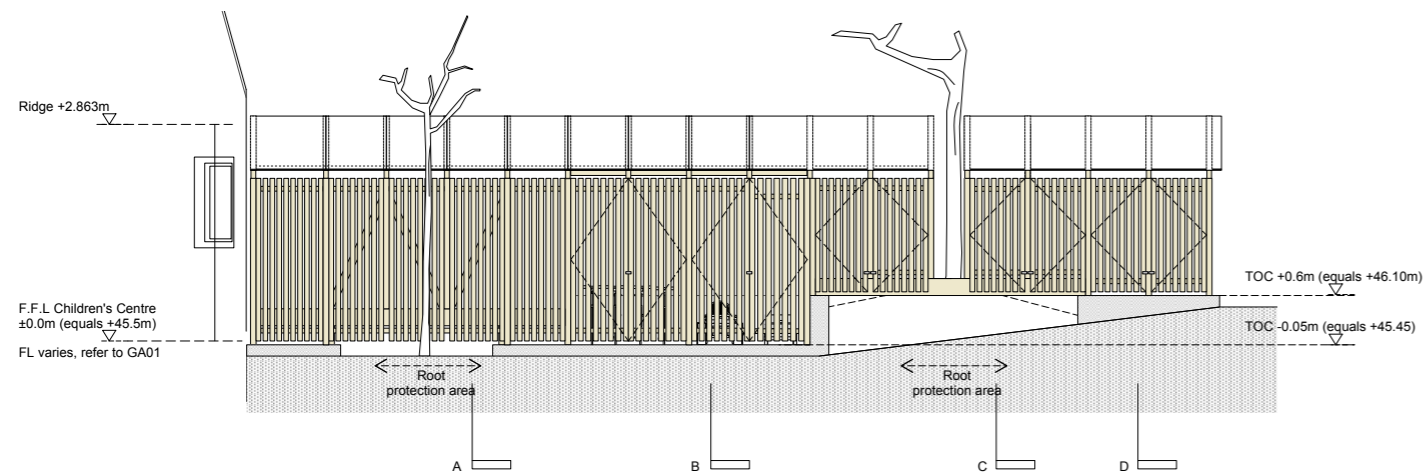
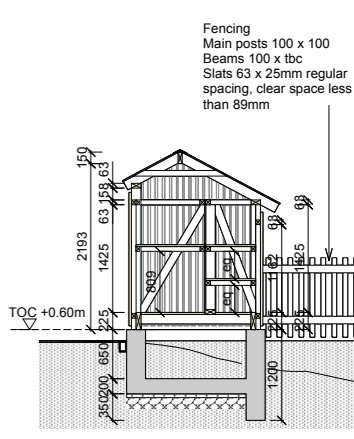
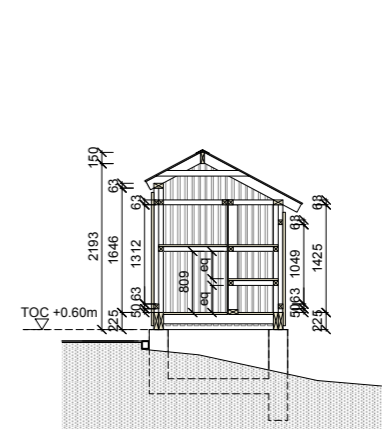
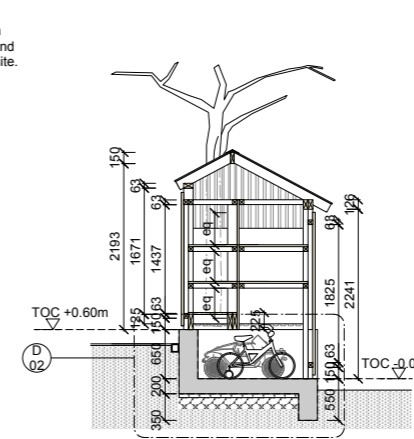
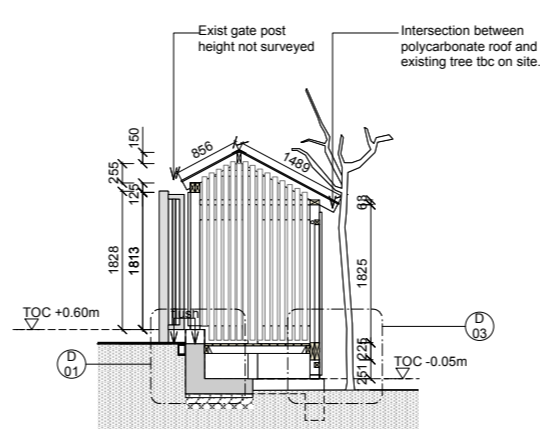
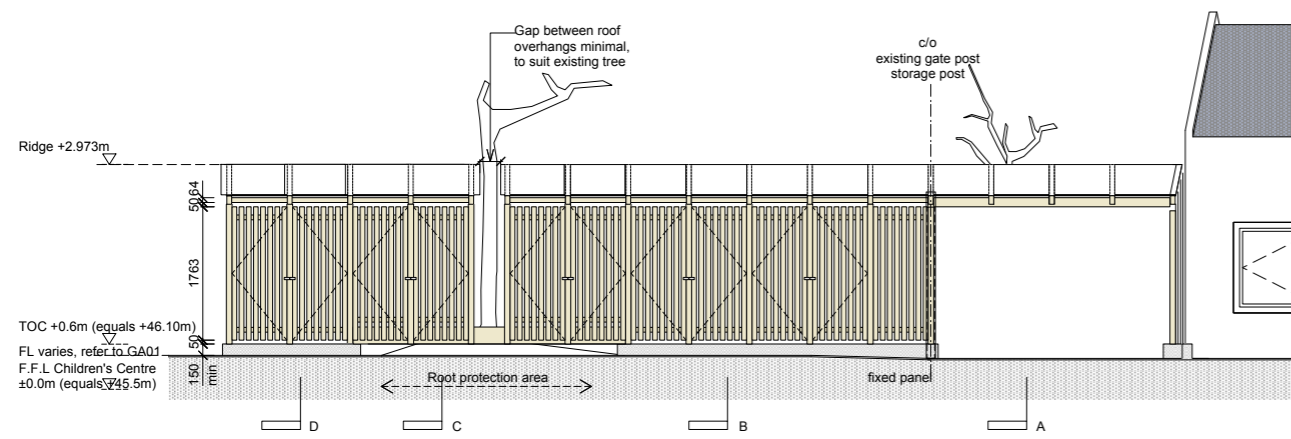
Cypress Children's Centre. London.
Involvement: RIBA Stages 3-5

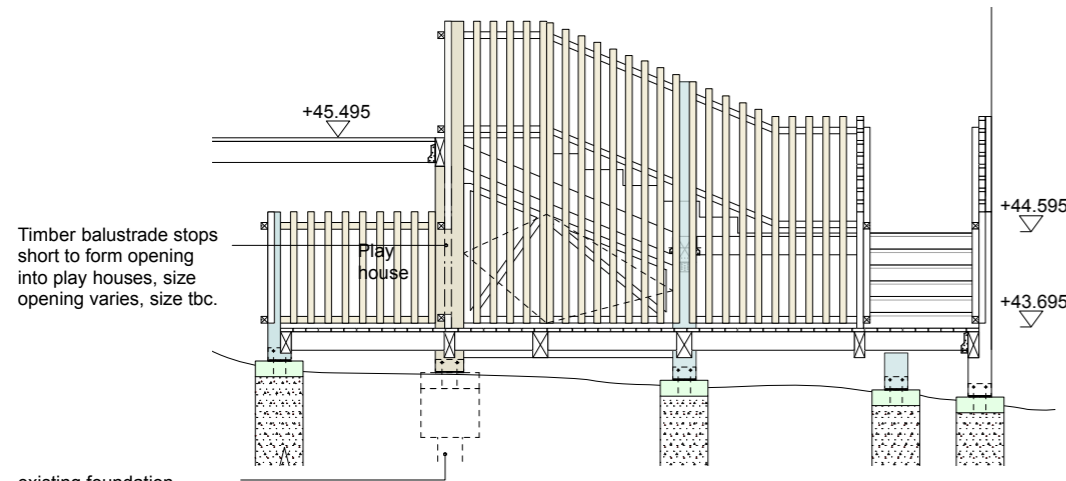


Cypress Children's Centre. London.
Involvement: RIBA Stages 3-5

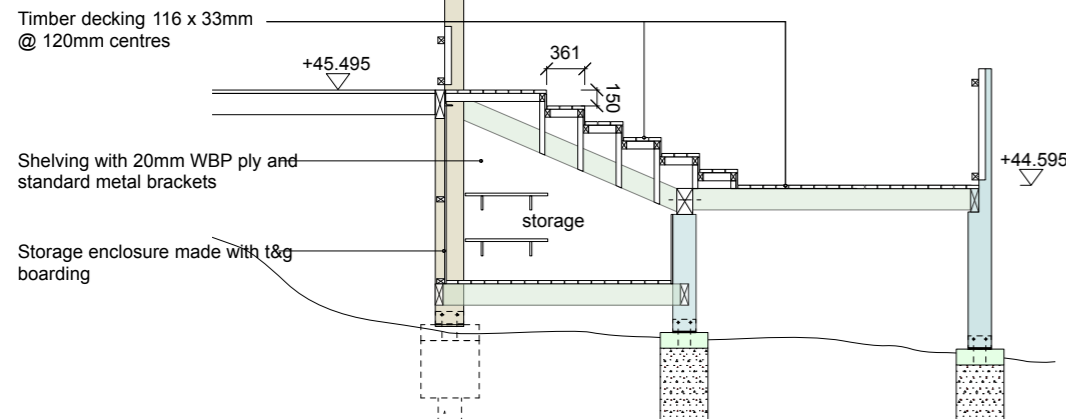
Professional Portfolio

William Wang

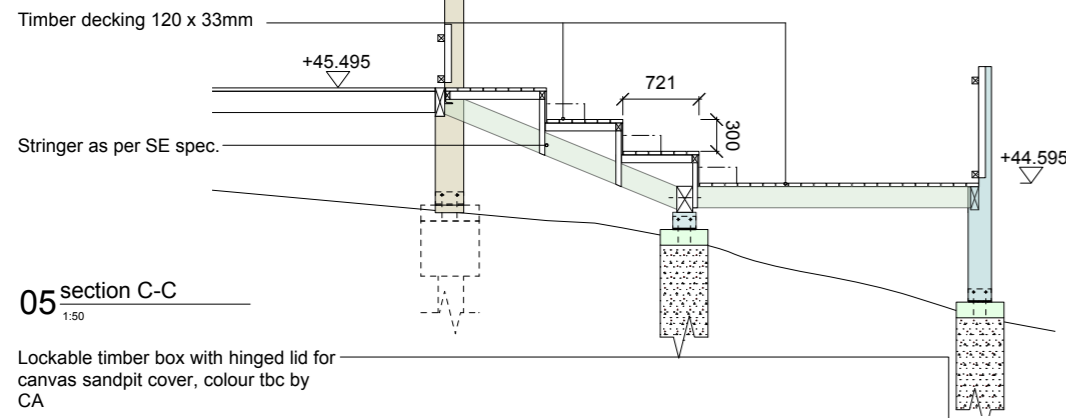




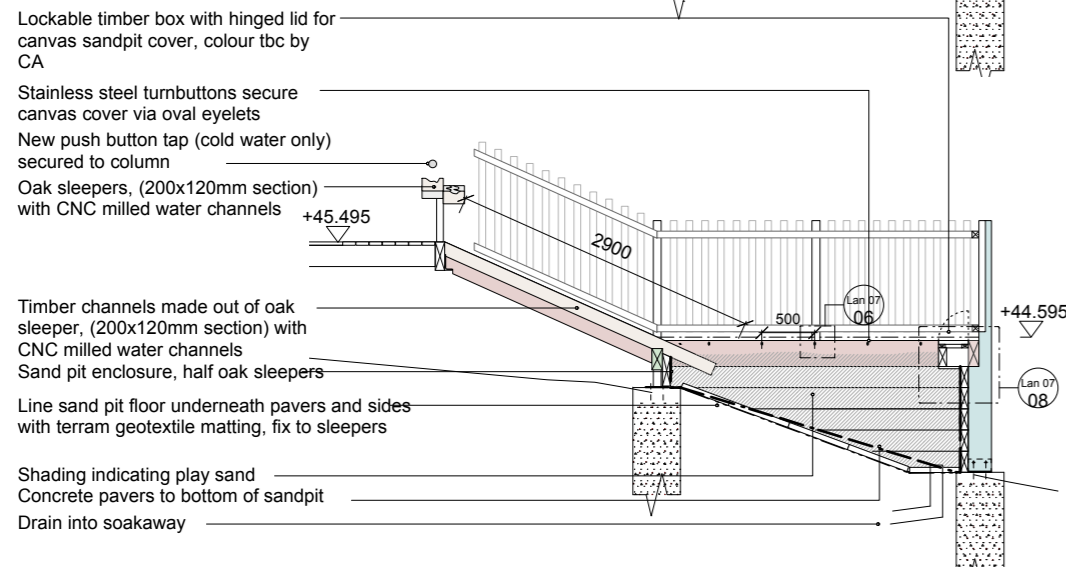
03 section A-A
1:50



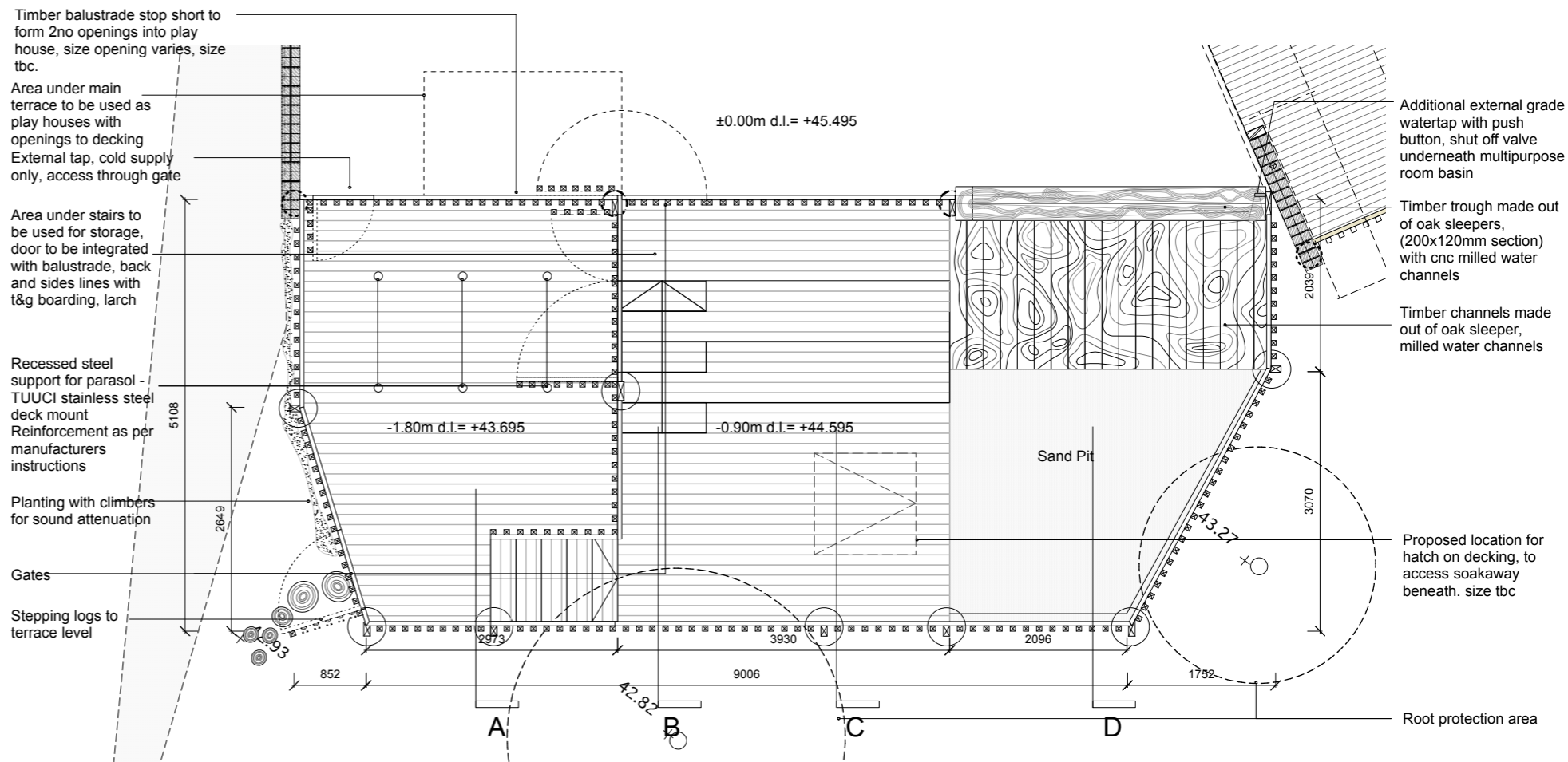
04 section B-B
1:50



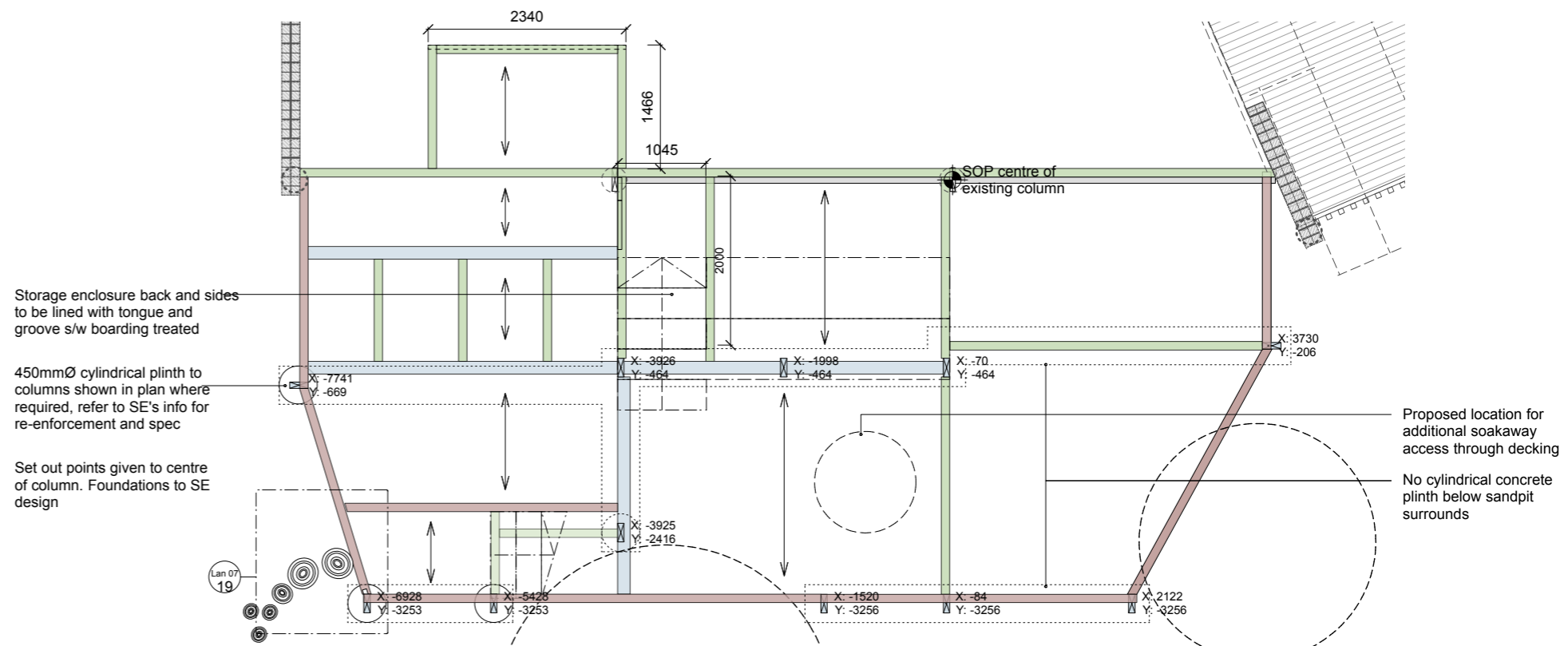
05 section C-C
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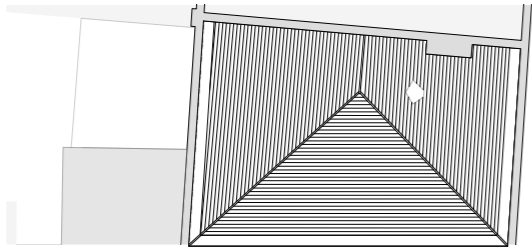
06 section D-D
1:50



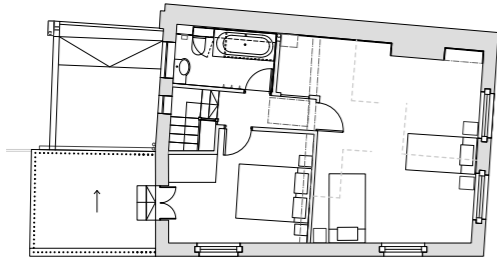
01 terrace extension plan
1:50



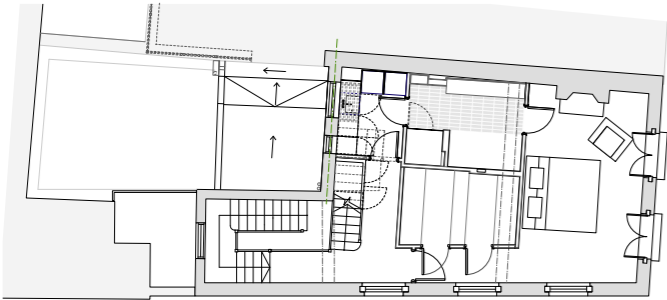
02 terrace extension lower plan with structure
1:50



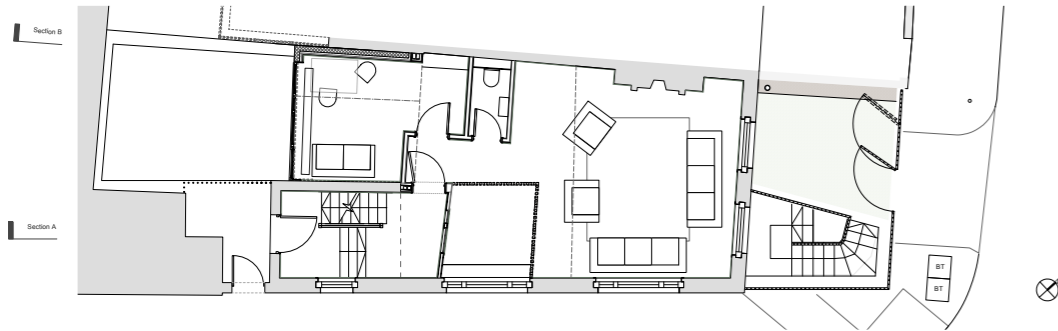
Roof Plan



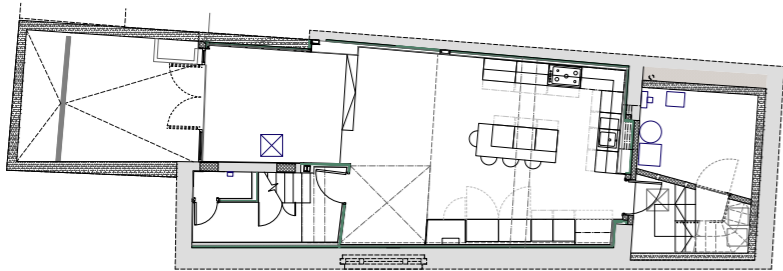
Second Floor Plan



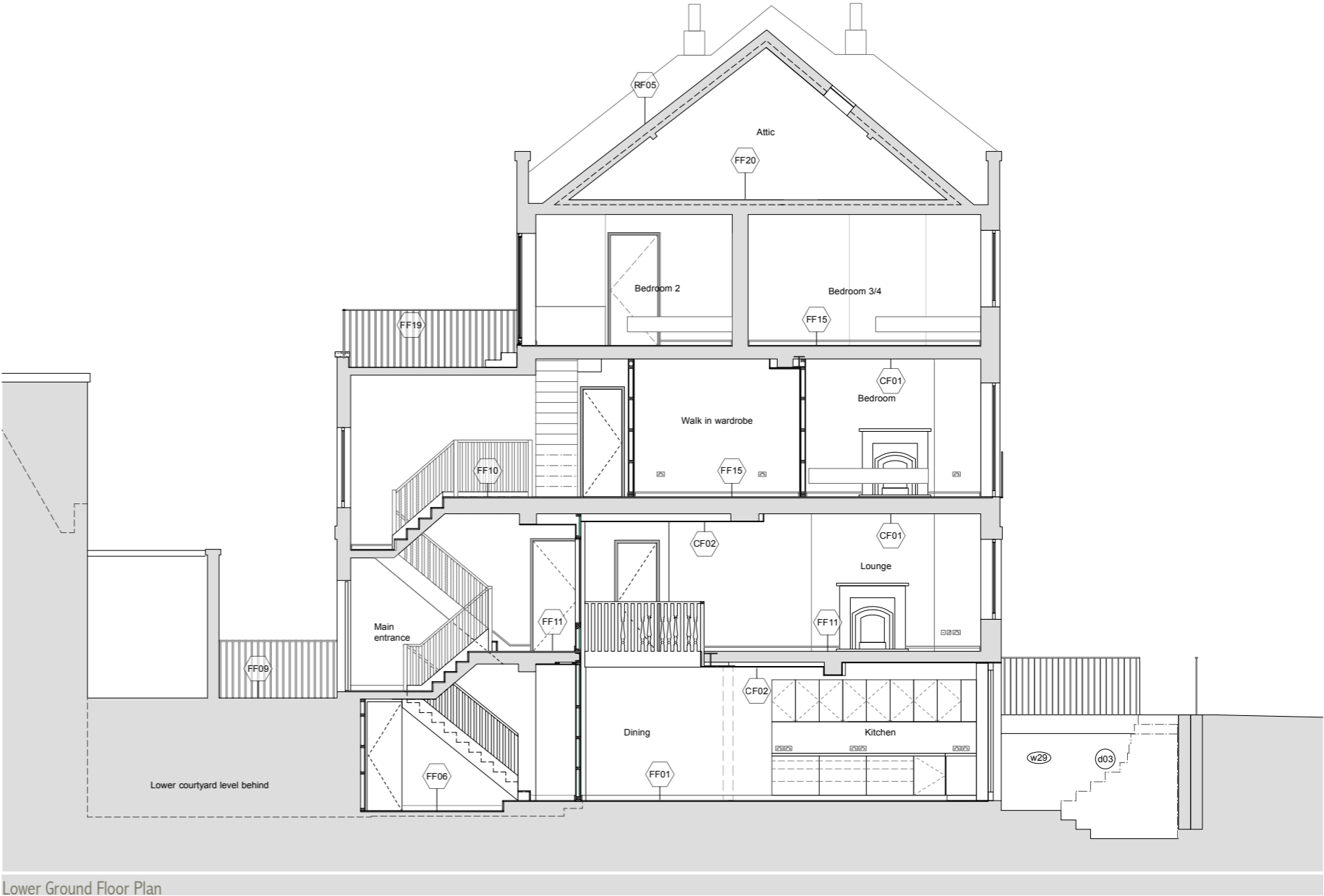
First Floor Plan



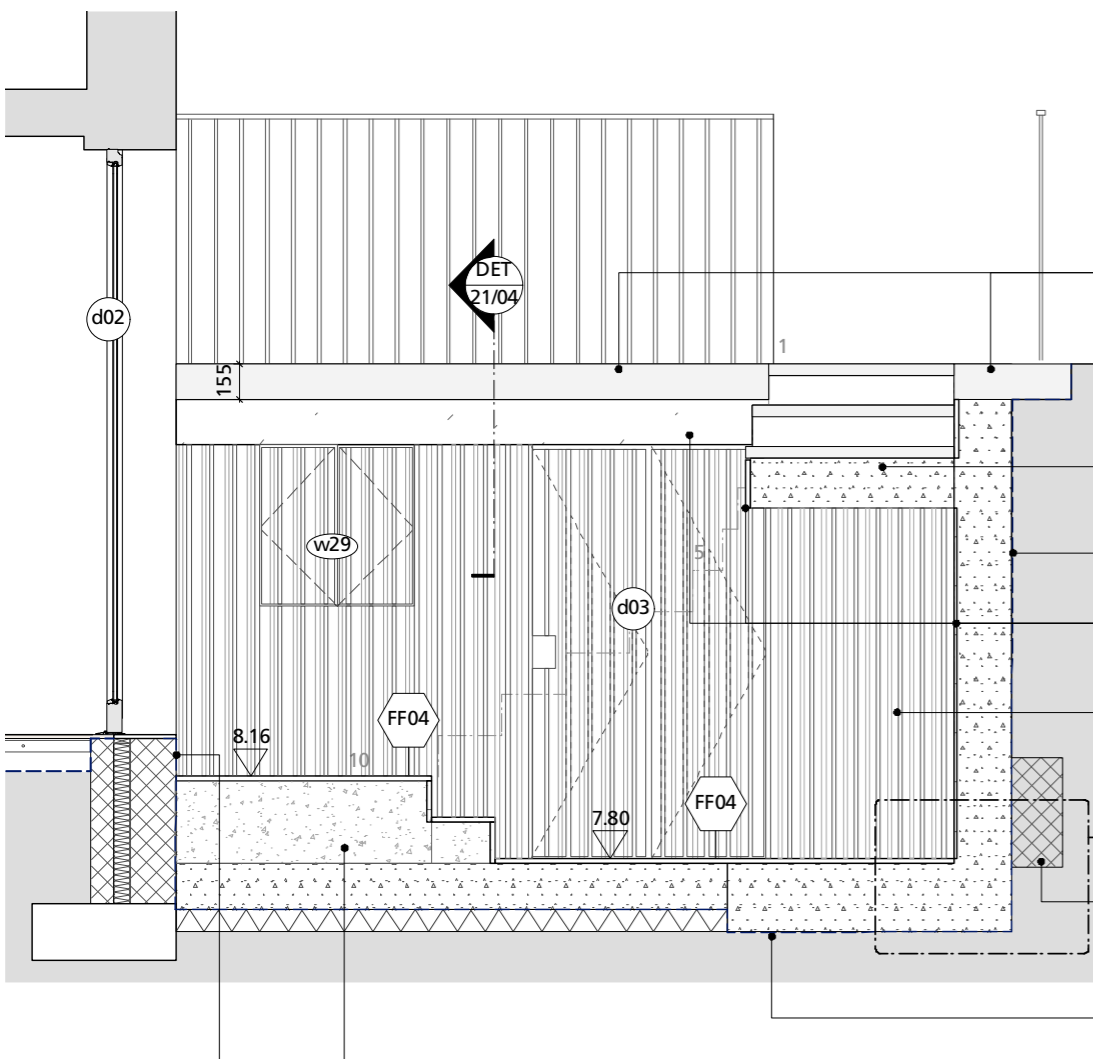
Ground Floor Plan



Lower Ground Floor Plan

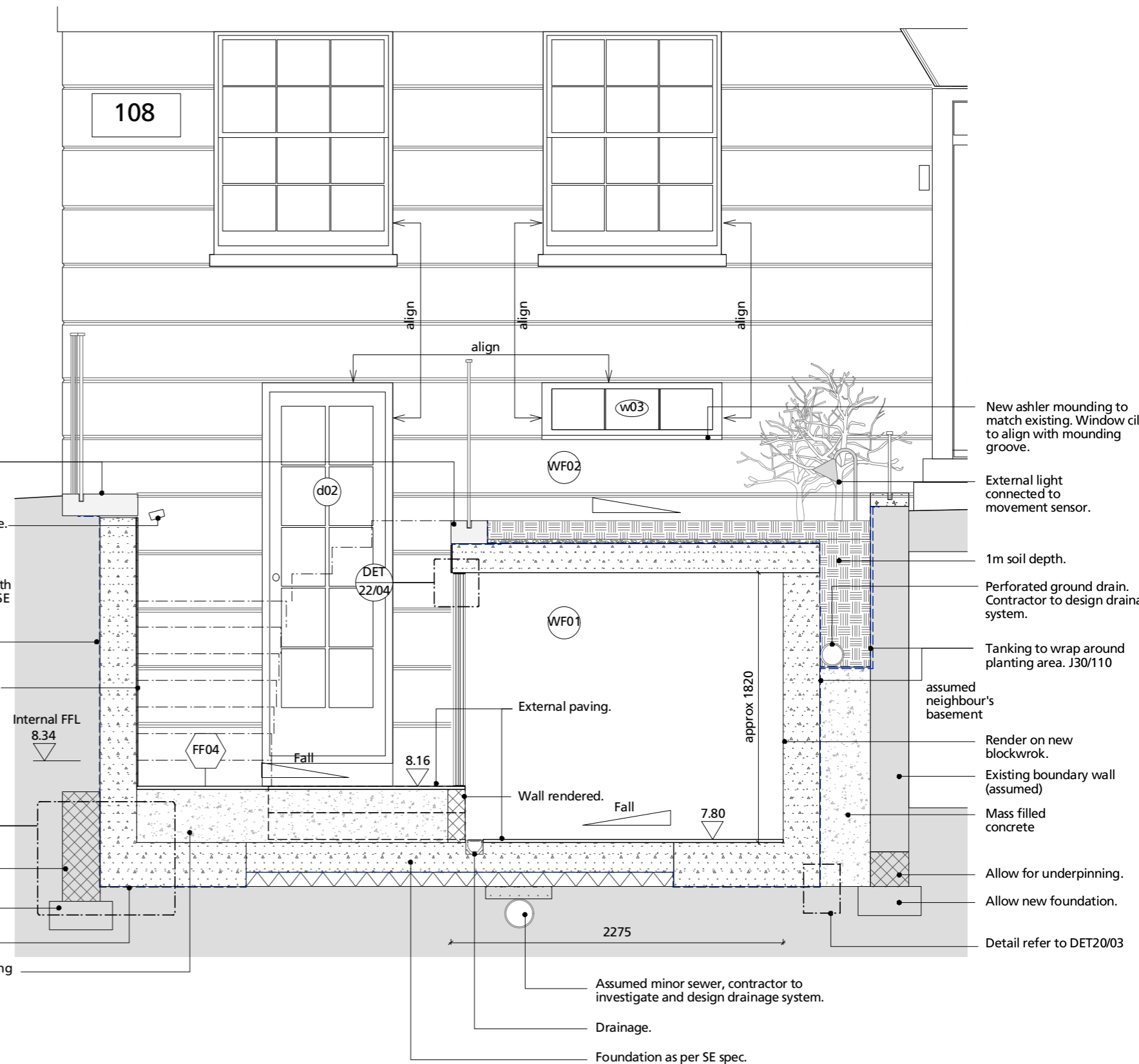


Lower Ground Floor Plan



Wall WF02, rendered over DPM to finish.

Front patio section A



Front patio section B

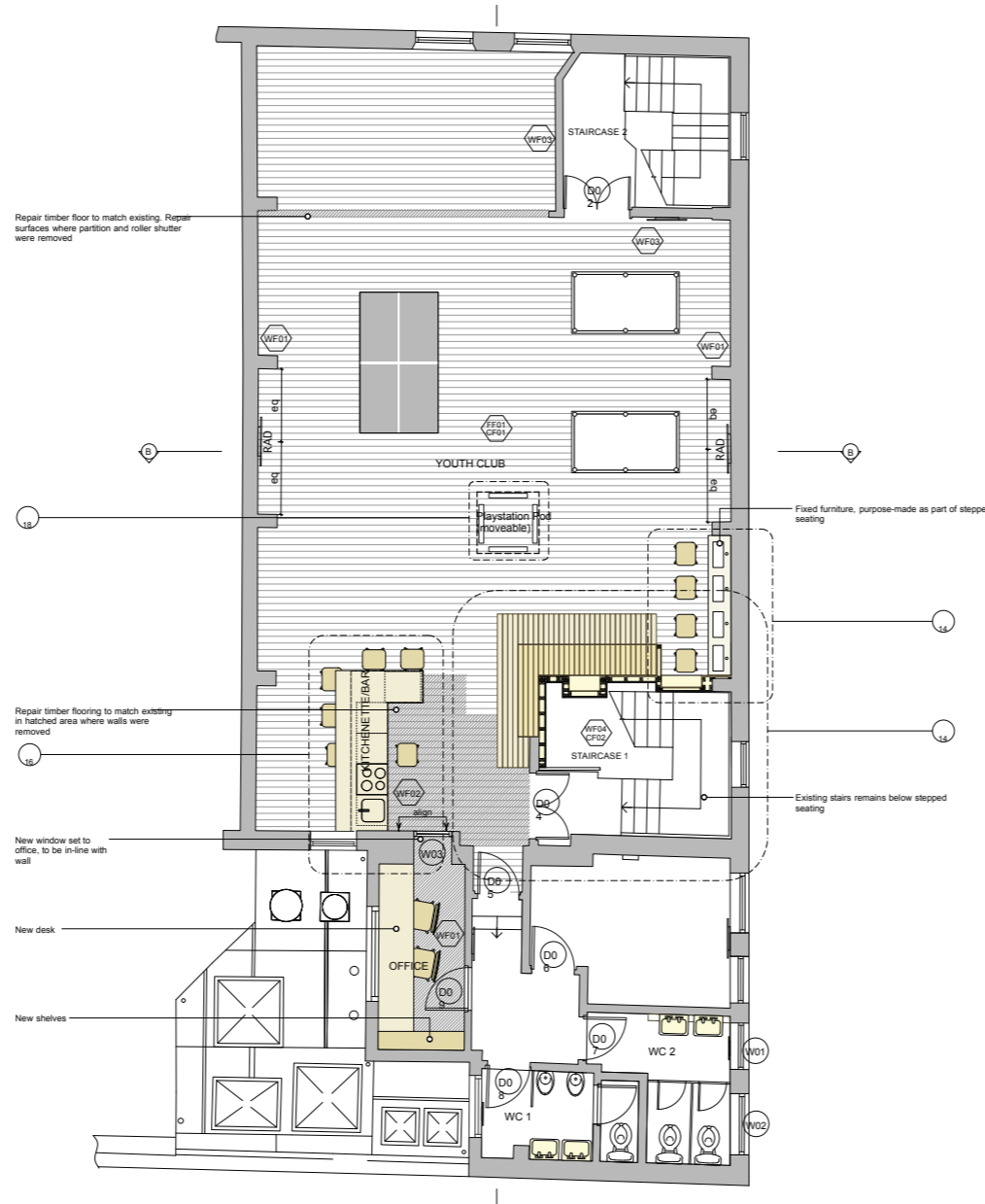
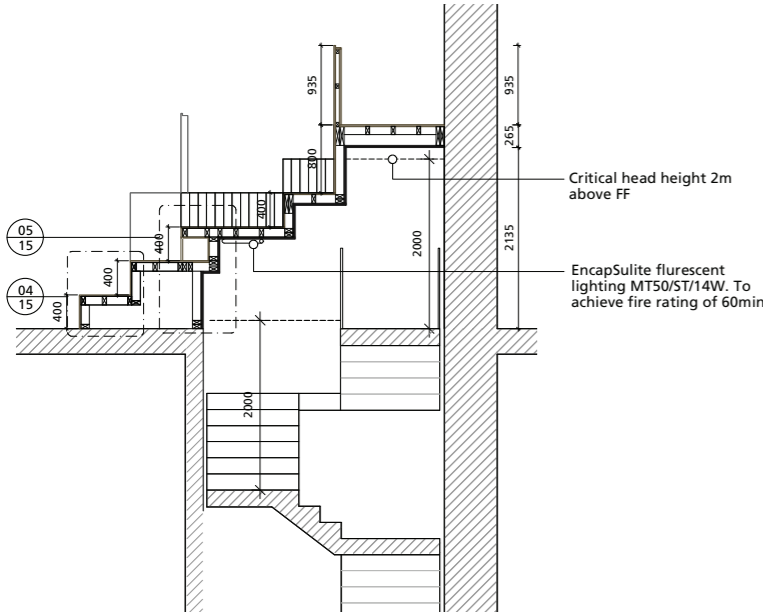
Cultural and Residential Projects

Full responsibility in leading cultural and residential projects from planning to practical completion. Work included a mixed-use project with a commercial unit on the lower levels.

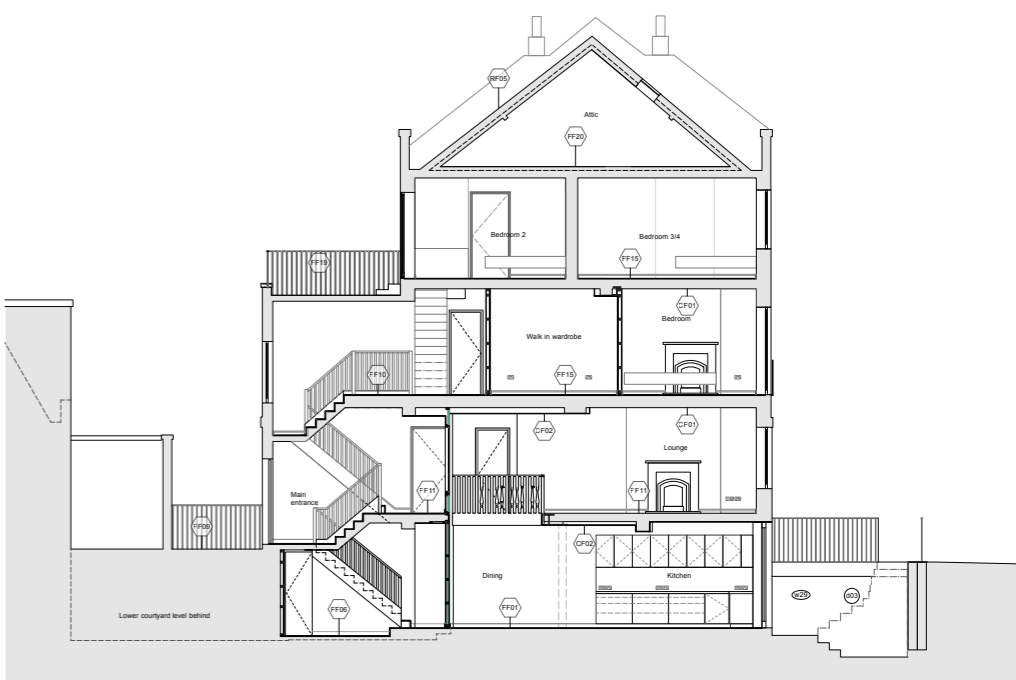
All projects were under traditional contract and were fully detailed and specified to reflect different architectural designs, in accordance with client briefs. The construction costs ranged from £250,000 to £1M.

My responsibilities included managing the team, production of information, client contact and contract administration.

Alpha Grove Community Centre. London.



Earl's Court Road Residential Project. London.



Cultural and Residential Projects

Involvement: RIBA Stages 1-5

Oxford Street Development

Westminster, London

The Oxford Street development is located at a busy thoroughfare nearby the new Cross Rail Bond Street Station. It proposes over 90,000 m² of office and retail space. The proposal aimed to attract leading international brands to Oxford Street.

Responsible for producing detail drawings and materials.



Aldersgate Development

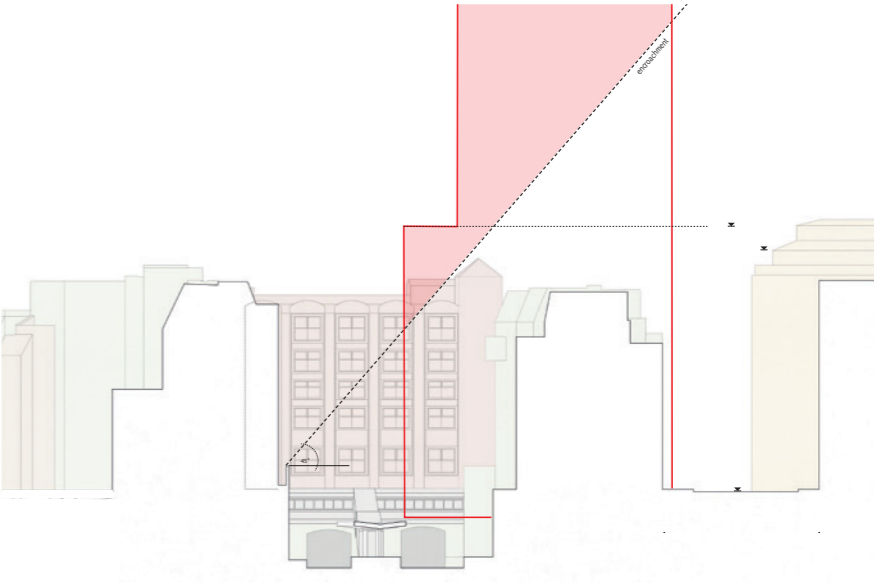
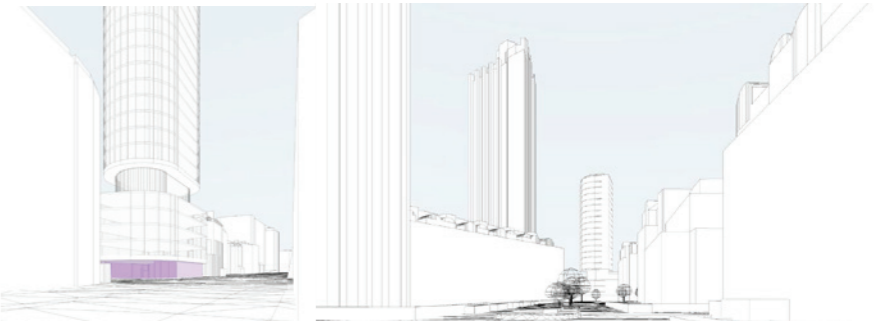
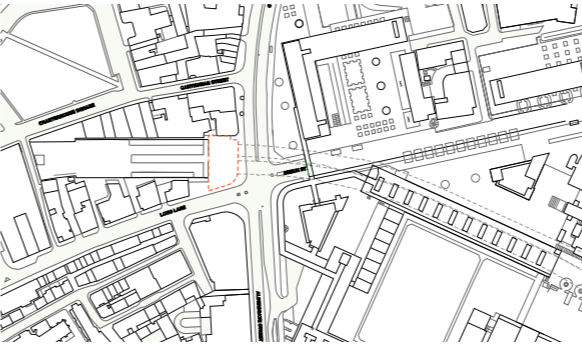
City of London

The scheme proposes retaining the Underground entrance position, with improved disabled access. This heightens the urban quality of the new block, creating a linear and more accessible route from the platform to street level.

The new configuration also frames the street views from Smithfield Market to the west and from Barbican Estate to the east.

The mixed-use project included office space at the base and residential units above.

I was responsible for producing all drawings and documents and worked solely with a senior associate in delivering the feasibility project. My roles included client contact and coordination.



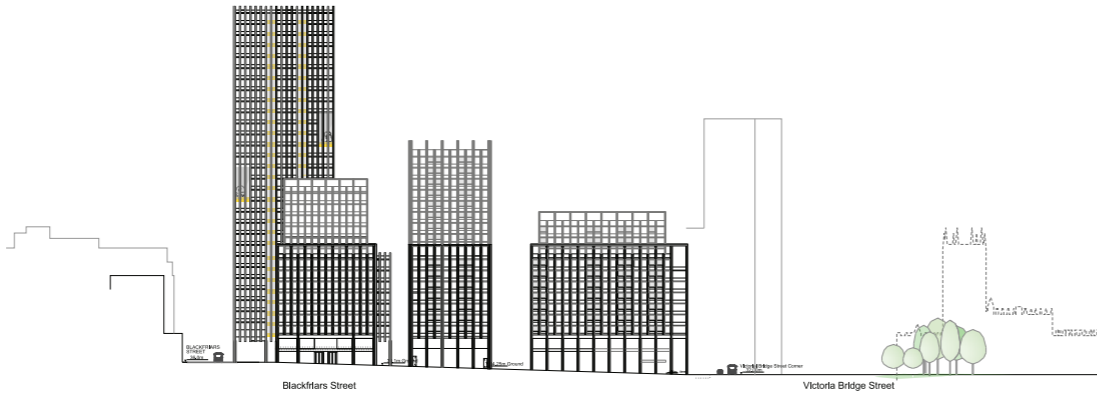
Deansgate Development

Manchester, UK

The proposal for the redevelopment of the Renaissance Hotel site consists of forming three residential buildings and one five star hotel, separated by pedestrian streets, leading to one large landscaped public square overlooking River Irwell.

Adjacent to the cathedral, the major riverside development aims to act as a catalyst to regeneration of the site and surrounding area. The proposal included 493 residential units and 7,500m² of retail space.

I was responsible for façade design with the director and producing all drawings for this invited competition.



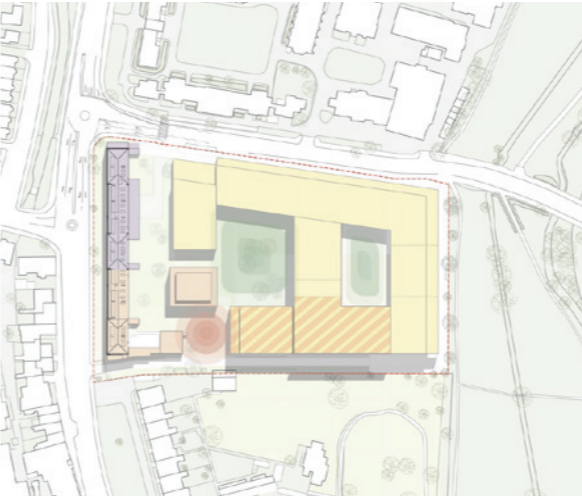
Cambridge Engineering Site Masterplan

Cambridge, UK

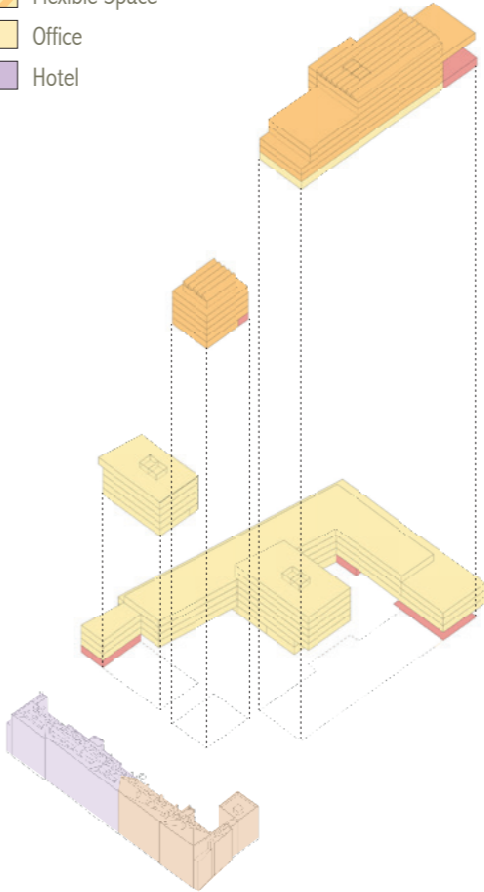
As part of a long-term plan for the University of Cambridge, my office was appointed to look into a ten-year plan for the Engineering Department site. Three main options were proposed with varying financial viability and architectural merits.

The preferred proposal retained and re-used the existing listed Scroope Terrace townhouses, whilst opening up the rest of the site for flexible office and academic use, which includes urban squares. The final iterations of the proposal will produce upwards of 55,000 m² GEA.

Working as a project architect under a senior associate, my responsibility included client contact and consultant coordination.



- Academic Space
- Flexible Space
- Office
- Hotel



The North Wing
Cultural/academic use will be positioned on the northern edge of the site, overlooking Peterhouse gardens. Part of the building could offer flexible-use office space.

The Stand-Alone Building
The proposed block provides an opportunity at the south of the Academic Square that could characterize the square. Preferably, this block will be entirely used by the University, although it could also be leased out in parts as flexible office spaces.

Office Building
Office blocks set along Fen Causeway to the South and Coe Fen to the West, forming two main courts in the centre .

Hotel
Keep the existing footprint of Royal Cambridge Hotel. Redevelopment will be subject to chosen hotel operator proposals . There is the possibility of a new build wing to the rear of Scroope Terrace or alternatively a landscaped foreground including car parking.

Department of Architecture and History of Art
Keep the existing footprint of the department in Scroope Terrace . All facilities to be refurbished . There are additional spaces provided as part of the Academic Square which the faculty can grow into